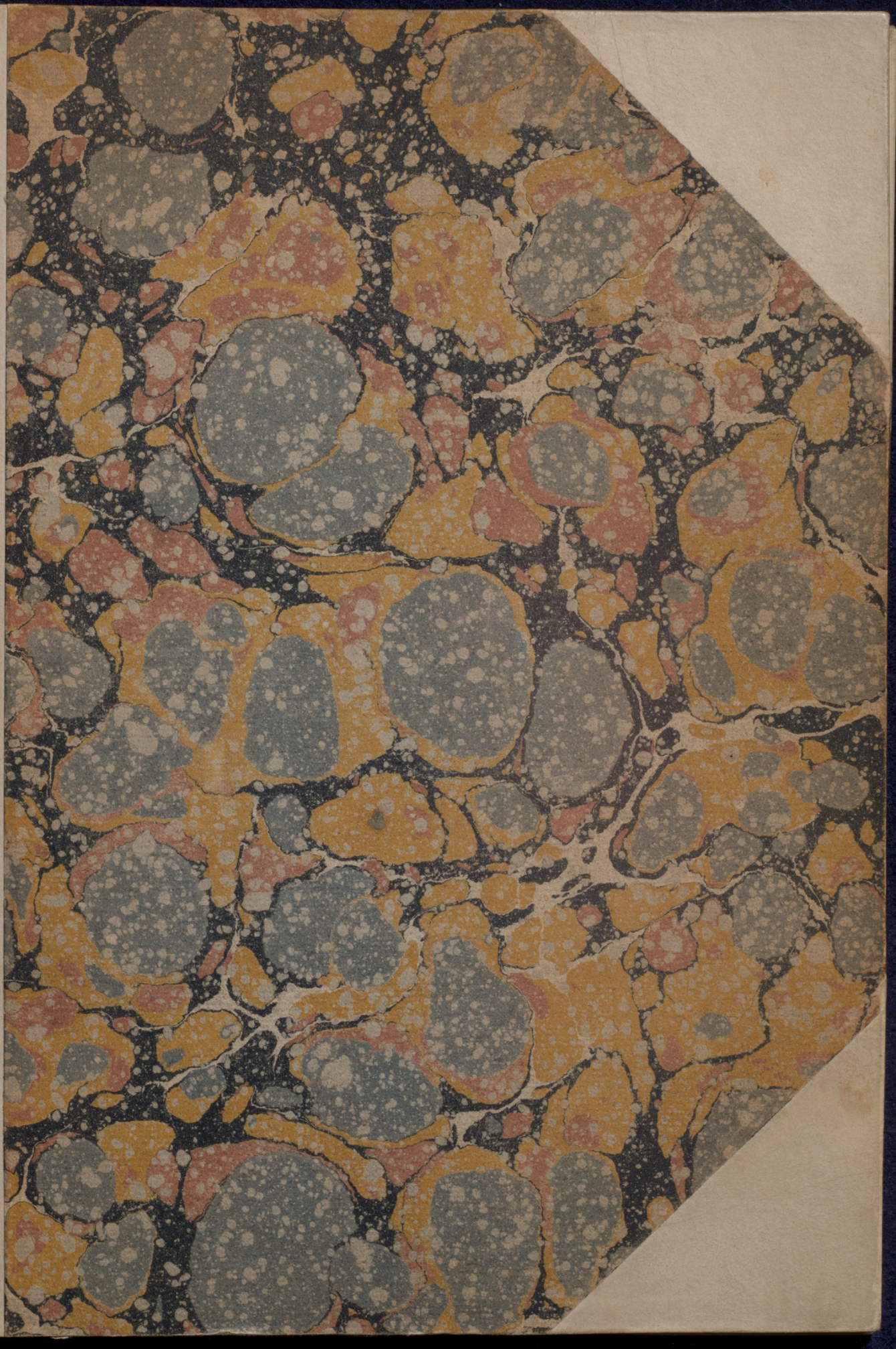

SIMPSON (Sir JAMES YOUNG) 1811–70.

1433. [MS. in the hand of Sir J. Y. Simpson, beginning 'The whole evidence goes to show that the high & whole credit of the practical application of sulphuric ether to anaesthesia in dentistry & surgery pertains to Dr Morton, and was worked out by him in the latter part of 1846'. 2 leaves (3 pages of writing), $9\frac{3}{4} \times 7\frac{1}{2}$ in., undated.]

Endorsed: '... Sent to me (W. O.) by Sir Alex. Simpson'; it is probably the 'supplemental MS.' mentioned in the postscript of his letter dated 31. xi. 14 in no. 1434, with which this is bound.

1434. [Correspondence, MS. & pr., on Simpson's connection with the introduction of anaesthesia, and on Long, from Sir Alex. R. Simpson, Sir W. Osler, Leonard Guthrie, George Foy, Sir R. Douglas Powell, J. Collins Warren &c. The pr. extracts are mainly from the Lancet, 1911 & 1914.] 8° &c. *v. pl.*, (1911–14).

The Osler letters are those dated Oct. 26 and Nov. 16, 1914, to the Lancet.

In vol. lettered: Simpson on Anaesthesia.

1464. Sir James Simpson and Ether in Midwifery Practice. la. 8°. [*Lond.*], (1911).

Extr. fr. Brit. M. J., 1911, i, pp. 1328–9.

Bd. with no. 1434.

SIMPSON (Sir ALEXANDER R[USSELL]) 1835–1916.

1467. The Jubilee of Anæsthetic Midwifery. An inaugural address to the Glasgow Gynecological and Obstetrical Society ... 19 Jan., 1897. 8°. *Edinb.*, (1897).

With portraits &c. Bd. with no. 1434.

1485. [Corrected galley proof of part of Sir J. Y. Simpson's (2nd) letter addressed to Dr. Jacob Bigelow of Boston, April 1870, with corrections and additions in the handwriting of Sir James and of his son Sir Walter.] fol. [*Edinb.*, 1870.]

In the first of two letters from Sir A. R. Simpson in no. 1434, with which this is bound, the writer states that "the corrections are possibly the last scrapes of his [Sir James's] pen".

This Letter was published at Edinb. in 1870, and was reprinted in vol. ii of his Works, 1871.

An. 36 ① - ⑤

① 1434 1434'
② 1464 1464
③ 1433 1433.
④ 1485 1485
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1434

1434

FROM
THE LIBRARY
OF
SIR WILLIAM OSLER, BART.
OXFORD

TELEPHONE - 2580.
TELEGRAMS - "CHLOROFORM."

52 QUEEN STREET,
EDINBURGH.

19/x/14.

Dear Osler,

Having gone over my Uncle's library along with some of my own obstetrico-gynecological [illegible] & the College of Physicians a year or two ago I had really little hope of finding anything of his likely to meet your requirement.

My last child having left the nest last week I began this morning to clear out some

superfluities & came upon a
box with the materials of a kinder-
symphony with W. my children
used to entertain their friends, or
a party of my students or my
ward patients at a time. I
have passed it on to a grandchild
but took out of it the proof
W. I enclose.

You will see it is a corrected
proof of part of the letter Sir James wrote
or rather dictated to Dr. Bigelow of Boston in April
1870 when he was in his

last illness, so that the corrections
are probably the last scraps of
his pen. I see some of the
writing a F.S is in the hand of
his Son Walter, who succeeded to
him in the Baronetcy & Edited
the Second vol. of his fathers works -
the one which contains his
papers on anaesthesia. You
might look at the letter as it
is given on P. 237 of his Memoir.
I am sorry to have only a fragment
to offer you.

But here is something for you to do. Sir Henry Littlejohn passed away lately in a good old age. He was a great collector of books & there must be many of much value in the line of your present in the library he has left. He had a great admiration for Sir James & used to say, he was the one man of real genius that he knew. It is more than likely that some of the original Anarchist pamphlets are in his collection. His son, Professor Harvey L., lets me tell you that you will be made very welcome to any of Sir Henry's books that would meet

TELEPHONE - 2580.
TELEGRAMS - "CHLOROFORM."

52 QUEEN STREET,
EDINBURGH.

meet your requirements. There may be some in other departments that you would like to possess. Only, of course, he must retain the specially valuable collection of works in their own department of Medical Jurisprudence & Public Health. I didn't ask ~~him~~ Harvey when he thought of dismantling. If you would like to come & look thro' the books I will only too gladly give you a bed & help you & him with the summage.

Meantime I Enclose my
Astric effort & leave you to
make a Work or a mill of it

Yours very faithfully

A. R. Simpson.

3

TELEPHONE - 2580.
TELEGRAMS - "CHLOROFORM."

52 QUEEN STREET,
EDINBURGH. 31/XI/14.

Dear Osler,

Thanks for the Astruc paper & for your letter.

The latter made me look at the Lancet, where you justly quote Sir James' own final statement. You may like to have a copy of a lecture I gave to the Glasgow Eng. Society which states what I regard as the truth in the historical

setting of the introduction of
anaesthesia into medical practice.
I found when visiting
Hartford a few years ago that
our brethren there still main-
tain that Wells deserves more
credit than Morton whom
he started in business &
who got from Wells the
anaesthetic idea. Wells
had the courage to submit
himself as the first subject

for Experiment in painless
Surgery. He let a brother
dentist extract from him
a tooth after which he had put himself
asleep with laughing-gas. When
he came out of it. he said
"Paris makes a new era in surgery".

I sent you also another
historical lecture - the one in
which I referred to Asturias.
I expect I can come to London
any Wednesday that fits in with
your other arrangements.

Having the Lancet in hand
I read Sir Douglas Powell's
address with much interest

Yours very faithfully

A. R. Simpson.

In looking for a copy of the
History of the Chair I came on
the supplement to M.S. W. I also
enclose

Correspondence.

"Audi alteram partem."

SIR JAMES Y. SIMPSON AND ANÆSTHESIA.

To the Editor of THE LANCET.

SIR,—In his delightful Harveian Oration Sir R. Douglas Powell attributes the discovery of anæsthesia to Sir James Y. Simpson. By a curious coincidence, on the very day on which I heard the address I received from Sir Alexander Simpson the proof sheets of a letter written in April, 1870, to Dr. Bigelow, of Boston, in which Sir James Simpson repudiates anything so "wild or extravagant" as that he used chloroform as an anæsthetic before ether. Thirteen months had elapsed; and later in the letter, discussing the rival claims of Jackson, Wells, and Morton, he decides in favour of Morton, saying that he was "the gentleman to whom I believe the profession and mankind are really and truly indebted for first reducing into practice the production of insensibility by ether inhalation, with the object of annihilating pain in surgical operations." The splendid work which Sir James Simpson did in those early days can never be forgotten, but it is unjust to his memory to attribute to him, as is so often done in this country, a discovery which had become "the blessed possession of the whole world" (to use a phrase of Professor Welch) before the introduction of chloroform.

I am, Sir, yours faithfully,

Oxford, Oct. 26th, 1914. WILLIAM OSLER.

SIR JAMES Y. SIMPSON AND ANÆSTHESIA. 4

To the Editor of THE LANCET.

SIR,—In your issue of to-day Sir William Osler, by his interesting extract from Sir J. Y. Simpson's letter to Dr. Bigelow, shows that Simpson repudiated the suggestion that he had used chloroform as an anæsthetic before ether. Indeed, he could not have done otherwise, for it is on record that he used ether for the first time in midwifery practice on Jan. 19th, 1847, whereas it was not until Nov. 4th of the same year that he introduced chloroform as an anæsthetic to his friends J. M. Duncan and Keith. A graphic account of this celebrated symposium in the "Athens of the North," when chloroform was the fare and not a Chian vintage, has been given by Professor Miller.[1] It is, however, on the question of priority in the use of ether that I venture to address you.

Simpson, according to the extract from his letter quoted by Sir William Osler, after discussing the rival claims of Jackson, Wells, and Morton, decided in favour of Morton. He therefore does not seem to have known in 1870 that Dr. Crawford W. Long, of Athens, Georgia, undoubtedly used sulphuric ether as an anæsthetic during minor operations four years and six months before it was so employed by Morton at the suggestion of Jackson, and nearly three years before Wells used it at Marcy's suggestion, and discarded it in favour of nitrous oxide. Long's first anæsthesia with sulphuric ether was on March 30th, 1842. Morton's first anæsthesia with sulphuric ether was on Sept. 30th, 1846. Wells's first anæsthesia with nitrous oxide gas was on Dec. 11th, 1844. A few days later he experimented on himself with sulphuric ether, but resolved to adhere to nitrous oxide alone. Dr. Marcy, of Martford, in January, 1845, gave the vapour of sulphuric ether to a sailor for the extirpation of a small wen on the side of his head. "The patient was insensible and the operation successful, but Marcy after this experiment still advised Wells to stick to the gas as being more agreeable and perhaps safer than ether."

For the evidence on the whole matter reference may be made to a paper by Dr. J. Marion Sims, New York, in the *Virginia Medical Monthly*, May, 1877, a reprint of which is in the library of the Royal Society of Medicine. It is fair to mention that the discovery of sulphuric either as an anæsthetic by Marcy, Jackson, and Morton was made without knowledge of Long's work. Long's fame was confined to the circle of a small country town. He waited for the opportunity—which never came—of performing some major operation under ether before communicating his experiences to the scientific world. It was not until 1853, when Morton and the friends of Wells and Jackson were clamouring for State recognition and reward for their labours, that Crawford W. Long made good his claim to priority in bestowing the gift which has since become "the blessed possession of the whole world."

I am, Sir, yours faithfully,

LEONARD GUTHRIE.

Upper Berkeley-street, W., Oct. 31st, 1914.

[1] Surgical Experiences of Chloroform. 1848–49

A MEMORIAL TO DR. C. W. LONG. 5

To the Editor of THE LANCET.

SIR,—A letter just received from the eldest daughter of Dr. C. W. Long tells me that the University of Pennsylvania, of which Dr. C. W. Long was a graduate, proposes to place in its medical school a bronze memorial medallion of her father. The unveiling ceremony is to take place on March 30th, 1912. The Provost of the University (Dr. Smith) "believes that for the purpose in mind, that of accentuating our recognition of Dr. Long's achievement, the anniversary of the first use of ether in surgery (March 30th), will be the most suitable date."

The plaster model of the medallion, which is much admired, is the work of a medical graduate of the University, Dr. R. Tait McKenzie, who enjoys more than a local reputation as a sculptor.—I am, Sir, yours faithfully,

July 24th, 1911. GEORGE FOY.

Correspondence. 6

"Audi alteram partem."

SIR JAMES Y. SIMPSON AND ANÆSTHESIA.

To the Editor of THE LANCET.

SIR,—I overlooked the courteous letter of Sir William Osler in THE LANCET of Oct. 31st correcting my reference to Sir James Y. Simpson as the discoverer of anæsthetics. The illustrious name of Simpson jumped to my mind in illustration of the point I wished to make, and at the moment I forgot that he had been anticipated with regard to ether. The interesting letter, again, of Dr. Leonard Guthrie in your issue of Nov. 7th corrects the Regius professor, and the two letters together are an additional exemplification of the point I wished to make that the discovery was due, was in the air, and focussed to practical usefulness almost simultaneously by several able experimenters. It seems incontestably shown by Dr. Marion Sims's article referred to by Dr. Guthrie that whereas nitrous oxide had been suggested as an anæsthetic by Sir Humphry Davy at the very commencement of the nineteenth century, the subsequent order of precedence in the discovery of various anæsthetics would seem to be Long (sulphuric ether) 1842, Wells (nitrous oxide) 1844, Morton (sulphuric ether) 1846, and Simpson (chloroform) 1847.

I still think that Simpson was the introducer of anæsthetics for general use in midwifery and in surgery, and it was not until his use of chloroform was established that disputes arose as to whom the reward of the discovery was due.

It is incidentally to be noted from the same source that the excitant properties of ether had been long known and utilised in America, and that on one occasion Dr. Wilhite had, in 1839, accidentally pushed the drug to the degree of extreme narcotism in the case of a negro.

I am, Sir, yours faithfully,

Portland-place, Nov. 9th, 1914. R. DOUGLAS POWELL.

Nova et Vetera.

SIR JAMES SIMPSON AND ETHER IN MIDWIFERY PRACTICE.

THE name of Sir James Simpson has come to be so closely associated with chloroform that few remember that the famous obstetrician, the centenary of whose birth takes place on June 7th, had anything to do with ether as an anaesthetic. And yet he had much to do with it. When in January, 1847, he introduced the use of anaesthesia into midwifery practice ether was the anaesthetic he employed, and he continued to administer ether until the November of the same year, when he was led, for various reasons, to prefer chloroform, and to substitute it for ether. That these facts have been overlooked is evident from a reference to recent works on midwifery published in this country (where such facts certainly ought to be known) and in other lands. Thus one writer[1] has this sentence:

> Since the introduction by Sir James Y. Simpson of anaesthesia by chloroform in midwifery the pain can always be kept within reasonable limits.

And other authors are evidently unaware that the use of ether in midwifery practice in Great Britain antedated its employment for the same purpose in America. Whitridge Williams, however, gives the facts clearly and consisely in his work on *Obstetrics*[2] in the following words:

> We are indebted to Sir James Y. Simpson, the discoverer of chloroform, for the introduction of anaesthesia into obstetrical practice. He employed ether for this purpose in the year 1847, and replaced it by chloroform after the discovery of the latter drug.

Even Whitridge Williams does not give the exact relationship of Sir James to chloroform, for the Edinburgh obstetrician discovered not chloroform but the anaesthetic power of chloroform; but he is correct in his reference to ether, although the statement he makes is very condensed. Other American obstetricians, however, would seem to be unaware of the facts, for in conversation recently with a distinguished teacher of gynaecology, and a writer of well-known books on the subject, we elicited the admission that the facts above referred to were quite unknown to him. It may, therefore, be not unprofitable to restate these facts with some little fullness.

It was on January 19th, 1847, that Sir James Simpson took the step which has had such far-reaching effects in midwifery practice, and the *Monthly Journal of Medical Science* for February[3] recorded the fact on its last page in a somewhat obscure way, under the not very inviting heading, "Medical News." The paragraph is entitled, "On Etherization as a Means of Procuring Insensibility to Pain," and it commences with the following sentence:

> As we closed our last number we had no more than time to announce in a few words the discovery of a method of rendering patients insensible to the pain of surgical operations and the like. Since then the periodical press, medical and public, has so trumpeted forth this discovery that it is impossible it should have failed to reach the ears of any one of our readers.

Then follow some notes on the use of ether in surgical work in London, Dublin, and Edinburgh, and on its employment in dental practice. The article then proceeds:

> The authors of the discovery are said to be Drs. C. T. Jackson and Morton of Boston. They (or someone else who professes to have to do with the discovery) intend to take out a patent both in America and Europe. . . . The idea of a patent is ridiculous, but the inventor deserves to be rewarded, if he be not content with fame, by means of a public contribution.

Then comes the paragraph regarding Simpson, which most concerns us at present. It is as follows:

> As we go to press we have received the following account of the successful use of this wonderful agent in Professor Simpson's practice. On the 19th of last month Professor Simpson tested the effects of the ether inhalation in a case presenting one of the most painful and difficult forms of parturition. The patient was lame and deformed, from disease of the hip-joint in early life; and the promontory of the sacrum could be felt projecting so far forwards as to diminish the conjugate diameter of the brim of the pelvis to about 2½ in.

After telling of the craniotomy which had to be performed at the first confinement, the account goes on to record:

> On the present occasion (her second labour) the umbilical cord was found presenting, with the head lodged high upon the brim, where it remained without making the slightest progress for several hours or offering at all to pass down into the pelvic cavity. Dr. Simpson had, upon the results of some previous cases of a similar kind, resolved to avoid, if possible, the use of the crotchet or other instruments, and to extract the child by turning. He effected this by grasping easily one knee; but after the body and extremities were born extreme exertion was subsequently necessary to extract the head. . . . The child gasped several times after birth, but respiration could not be established. Some time before the turning was attempted the woman was fully placed under the influence of sulphuric ether. During the whole operation she was (according to her own subsequent reiterated declaration and surprise), quite unaware of feeling any pain, or having any sensation whatever, and awoke just as the delivery was being terminated. . . After she was brought under the influence of the ether the uterine contractions continued regularly, but without knowledge or consciousness of pain on the patient's part. She is making the best possible recovery. Dr. Zeigler, Dr. Keith, and Mr. Figg were present throughout the progress of the case.

The paragraph ends with the editorial remark:

> We are not aware that the ether has ever been previously employed in the practice of midwifery.

In this modest fashion appeared the notice of the introduction of anaesthesia into that branch of medical practice in which it may be said with some assurance it has proved most beneficial and has been least attended with risk. With still less formality or display did it appear in the abstract of the proceedings of the Edinburgh Obstetrical Society:

> On the evening of Wednesday, January 20th, 1847—Dr. Simpson, President, in the Chair. After the Society had agreed that in future regular abstracts of its proceedings should be published in the *Monthly Journal of Medical Science*, Dr. Simpson related a case of turning under the influence of sulphuric ether, and proposed substitution of turning for craniotomy in cases of detention of the child's head at the brim of the pelvis.

Further:

> Dr. Simpson showed the child which he had on the preceding evening extracted by turning while the mother was insensible from the use of sulphuric ether.

Then, as if these two advances—anaesthesia in midwifery and turning in place of craniotomy—were not enough for one evening, Dr. Simpson also showed several instruments, such as pessaries, etc., which he had made of gutta-percha, and how easily and speedily they could be fashioned, by dipping them in boiling water, to suit any particular case. It was truly a memorable meeting of the Edinburgh Obstetrical Society.

A few weeks later, in the month of March, Professor Simpson himself published a full account of the case of version above referred to and added notes of several other cases, one of which was a forceps delivery at the Royal Maternity Hospital on February 3rd, and another was a similar labour in private practice on February 12th; in both these cases and in two others of non-instrumental labour on February 13th ether was administered with complete success, the women being quite insensible to the pains of parturition. Professor Simpson's article is dated February 18th. The following extract from the *Monthly Journal of Medical Science*, vol. vii, 1847, p. 721, shows clearly that Simpson was by no means hasty in forming his judgement of the suitability of ether for the purposes for which he had employed it. He wrote:

> A careful collection of cautious and accurate observations will no doubt be required before the inhalation of sulphuric ether is adopted to any great extent in the practice of midwifery. It will be necessary to ascertain its precise effects, both upon the action of the uterus and of the assistant abdominal muscles; its influence, if any, upon the child; whether it gives a tendency to haemorrhage or other complications; the contraindications peculiar to its use; the most certain modes of exhibiting it; the length of time it may be employed, etc. In no case have I observed any harm whatever, to either mother or infant, follow upon its employment. And, on the other hand, I have the strongest assurance and conviction that I have already seen no small amount of maternal suffering and agony saved by its application. The cases I have detailed sufficiently show its value and safety in operative midwifery. . . . Granting that experience will yet be able to prove its safety and efficacy in modifying and annulling the pains of labour, will (I have repeatedly heard the question asked) the state of etherization ever come to be generally employed with the simple object of assuaging the pains of natural parturition? Or (as the problem has not unfrequently been put to me), should we be "justified" in using it for such a purpose?

In a few paragraphs containing much that he was afterwards to expand into more complete propositions, Professor Simpson sketched the argument for affording relief from pain to parturient women, and he ended with the statement:

> Instead of determining . . . whether we shall be "justified" in using this agent under the circumstances named, it become, on the other hand, necessary to determine whether on any grounds, moral or medical, a professional man could deem himself "justified" in withholding, and not *using* any such safe means, as we at present presuppose this to be.

It is, to say the least, remarkable that Simpson should, within a month of his first use of an anaesthetic in midwifery, have so logically foreseen the possible objections to, and risks in, the administering of ether in labour, and have so clearly estimated the probable extension of its employment to cases of natural labour. As we have said, it was not till November 4th, 1847, that Simpson, with Keith and Matthews Duncan, discovered the anaesthetic properties of chloroform, and began to use it in place of ether as more potent, portable, and pleasant; and during the intervening months he was steadily employing ether himself and recommending it to others, as he himself stated in his paper read before the Medico-Chirurgical Society of Edinburgh in December, 1847.

Professor Simpson's first case of etherization in midwifery seems to have been made known also through the public journals, and on January 26th an unsuccessful attempt was made in St. Bartholomew's Hospital, London, to etherize a patient upon whom Caesarean section was about to be performed. About the same time—that is, about a week after its use in Edinburgh—Fournier Deschamps employed it in a forceps delivery in Paris (January 27th), and Dubois gave it in a similar case on February 8th. On February 13th Dr. Murphy of London stated that he had used ether in a case of turning. In Germany the first case seems to have been that under Professor Martin of Jena on February 24th; it was an instance of adherent placenta. In America Dr. Channing, Professor of Midwifery in Harvard University, employed ether in a forceps case on May 5th; and the first patient delivered under an anaesthetic in Ireland was a woman under the care of Dr. Tyler of Dublin on November 28th, a forceps case. These are the facts regarding priority as published by Simpson in October, 1848.[4]

It must not be forgotten, further, that it was in defence of ether, not in the first place of chloroform, that Sir James Simpson constructed those logical, pungent, and humorous arguments which did so much to place anaesthesia in midwifery practice on a sure and sound basis.

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[1] Westland, *The Wife and Mother*, p. 62, 1910.
[2] Whitridge Williams, *Obstetrics*, 2nd edit, p. 321, 1908.
[3] *Monthly Journal of Medical Science*, vol. vii, p. 639, 1847.

bandages whose cleanliness naturally left much to be desired. It should be added that the wife of Louis XIV was by no means the only one to proclaim aloud the evils of the "*emmaillotement*" which has been denounced over a century before by Montaigne; with very little effect, however, since we find François Mauriceau, in his book *Les maladies des femmes grosses et accouchées*, recommending swaddling as the most effective method of procuring for the child a good figure, and teaching him "to stand upon his two feet; for otherwise he would perhaps walk on all fours, like the majority of animals." Another interesting article in the same number of *L'Hygiène* is by Dr. A. Kermorgant, on the subject of yellow fever; whilst M. Paul Juillerat and Dr. L. H. Debayle have respectively contributed accounts of the unwholesome houses of Paris and the principal intestinal parasites in the tropics. Dr. Maurice de Fleury writes on the causes and prevention of insomnia. The illustrations of this most attractive magazine, as usual, deserve the highest praise.

One is accustomed to imagine that the report of a year's proceedings of any learned society must necessarily be something in the nature of a Blue Book, as uninteresting as it is instructive; but that this is not invariably the case is proved by the annual report of the Viking Club (published every year under the title of *The Saga Book of the Viking Club*), the first part of the seventh volume of which has recently made its appearance. This account of the eighteenth session of the Society for Northern Research is embodied in a most interesting and attractive periodical, beautifully printed and illustrated, which contains a summary of the meetings held by the members of the club during the past year, together with reprints of several papers read on these occasions. Those who are interested in the history of the various Norse invasions, and the extent of the Danish and Norwegian conquests in this country, will do well to study Mr. Robert L. Bremner's Notes on the Battle of Largs," and Professor Allen Mawer's masterly account of "The Scandinavian Kingdom of Northumbria"; whilst those to whom the human side of these terrible sea kings appeals more strongly than the recital of "old, unhappy far-off

important step in advance of old-fashioned purges and drastic mineral pills. These latter, with their mercury, bismuth, and other crude ingredients, only irritate, inflame, and, in the end, seriously injure, the delicate linings of the stomach and bowels. All such mineral drugs, doubtful in their physiological action and paralysing and harmful in their eventual effect, do not in any way, directly or indirectly, enter into the composition of Ker-Nak, which, on the contrary, contains certain essences and oils, the valuable constituents of fresh ripe fruit, together with valuable vegetable extracts and internal disinfectants reputed for their purity and medicinal worth. . . . The unapproachable excellence of Ker-Nak from a medicinal or healing standpoint, as well as its greater suitability for sickness contracted under present-day conditions . . . renders this *natural* treatment, so invaluable in cases of: Constipation, Headache, Indigestion . . . Sleeplessness, Neuralgia, Palpitation . . . Anaemia, and most Female Ailments (in youth, motherhood, middle-age, and declining years), Piles . . . Hysterics, Shortness of Breath . . . Rheumatic Affections, Influenza, and its after-effects. . . .

The lengthy circular concludes with a paragraph headed:

FREE ADVICE.

Any reader in need of sound advice upon his or her own ailment can have, Free of Cost, the assistance of our fully qualified Medical Staff.

Describe in detail all the symptoms of your illness, say how long the illness has lasted, and what you have been doing for it in the past; and have no hesitation in stating fully any matter which troubles you. The medical staff will tell you frankly and in confidence what is the best treatment for you to adopt.

The directions on the package are:

Dose—1 to 3, or in severe cases, two doses of 2 each, one dose at night and repeat after the next mid-day meal.

The pills were coated with orange-coloured pearl-coating; after removing it they had an average weight of 1½ grain. Chemical and microscopical examination indicated the presence of aloes (Barbados) or a preparation of aloes, a little soap, a very little oleo-resin of capsicum, and a little vegetable tissue which appeared to be marshmallow root (used as an excipient). There was no evidence of the presence of mercury or calomel.

COCKLE'S PILLS.

The present maker's name of these is not given, but they are described in the circulars which accompany them "As Prepared by the late James Cockle, Surgeon and Apothecary, 4, Great Ormond Street, London." A box, price 1s. 1½d, was found to contain 16 pills. It was also stated that:

These pills consist of a careful and peculiar admixture of the best and mildest vegetable aperients, with the pure extract of the flowers of the camomile. They will be found a most efficacious remedy for derangement of the digestive organs, and for obstructions and torpid action of the liver and bowels, which produce Indigestion and the several varieties of Bilious and Liver Complaints . . . these Pills are not recommended as containing any new or dangerously active ingredients; on the contrary, they are characterized by a remarkable simplicity of combination, and whatever merit they may be found to possess depends as much upon the selection of pure drugs and the unusual labour and attention bestowed upon their subsequent preparation, as upon the acknowledged peculiarity of their composition. They are not recommended as a panacea, nor are they adapted to all complaints; but as a mild and efficacious *aperient* and *tonic* in the various forms of Indigestion, with intestinal irregularity admitting their use, it will not, perhaps, be an exaggeration to state that they have been resorted to under all systems of diet, changes of climate, or atmospheric alternations, with an extraordinary degree of success, for a period extending over more than half a century.

The directions vary from "One Pill to be taken an hour before dinner" to "Two or three at any time."

The pills had an average weight of 4 grains. Chemical and microscopical examination indicated the presence of aloes (Socotrine), a little soap, powdered colocynth, powdered jalap, and another vegetable tissue which did not agree in characters with any drug now in ordinary use, and which could not be identified. No evidence of the presence of mercury or calomel was detected.

BURGESS' LION PILLS.

We published some time ago the results of analysis of Burgess' Lion Ointment, and the Pills are a companion

purifying and preventing the recurrence of disease. When ailing from Headache, Giddiness, Pains in the Back or Loins, Loss of Appetite, or a feeling of General Debility, these Pills will be found most invaluable.

The directions on the label are "Two to be taken at bedtime."

The pills were pearl-coated; after removal of the coating they had an average weight of 4¼ grains. Chemical and microscopical examination indicated the presence of ipecacuanha, rhubarb, a little jalap, probably aloes (Socotrine), and oil of peppermint, and soap. There was no evidence of the presence of mercury or calomel.

HOOD'S VEGETABLE PILLS.

These are supplied by C. I. Hood and Co, Limited, London, in a bottle, price 1s. 1½d., containing 34 pills.

They are described on the package as

The great Liver Invigorator. A mild, efficient cathartic, purely vegetable, unequalled as a family physic and after dinner pill. A valuable remedy for Liver Complaint, Constipation, Nausea, Biliousness, Headache, Indigestion, Sour Stomach, Distress after Eating, Jaundice.

The directions, given in a circular enclosed in the package, are:

For Biliousness, Jaundice, Sick Headache, Constipation, Flatulence, Dizziness, Nausea, and all Liver Troubles, and to Relieve or Prevent Malaria and Influenza. For laxative effect, the usual dose is one, two or three pills taken at bedtime in a draught of water; for purgative effect, from three to six pills, taken in the same way. . . .

For Indigestion, Heartburn, Distress in the Stomach, Fulness after Eating: The usual dose is one pill taken immediately after eating, in a draught of water.

The pills were sugar-coated, and, after removal of the coating, they had an average weight of ½ grain. Chemical and microscopical examination showed the presence of aloes (Barbados) or a preparation of aloes—probably aloin, ginger, capsicum, colocynth, soap, and probably a little jalap. There was no evidence of the presence of mercury or calomel.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

AT the annual general meeting of this society on May 17th, Dr. Blandford, President, in the chair, it was reported that the society consists of one honorary member and 140 life and 153 ordinary members. The invested funds amounted to £100,900, and the income consisted of the interest on this sum, £3,141, together with £352 received in subscriptions and donations. The sum of £3,131 10s. had been distributed among the annuitants of the charity, 48 widows and 13 orphans. The Copeland Fund enabled the society to grant to any widow or orphan already in receipt of the society's ordinary relief extraordinary assistance in special circumstances of unusual distress, such as blindness or grave permanent disease, and to continue such extra relief in the case of orphans beyond the age of 16 or 18 years, at which ordinary relief ceases. Relief is only granted to the widows and orphans of deceased members who have paid their annual subscription for three years or who are life members.

The directors desire to bring to the notice of the members of the medical profession, especially the younger, the advantages of joining the society. Membership is open to any registered practitioner who at the time of his election is resident within a twenty-mile radius from Charing Cross. Should any member remove beyond the limits of the society he nevertheless continues to be a member. The annual subscription is two guineas; every member who has paid this sum for twenty-five years becomes a member for life. Life membership may also be obtained by the payment of one sum, varying with the age of the applicant.

Further particulars and application forms may be obtained from the Secretary at the offices of the society, 11, Chandos Street, Cavendish Square, W.

Nova et Vetera.

SIR JAMES SIMPSON AND ETHER IN MIDWIFERY PRACTICE.

THE name of Sir James Simpson has come to be so closely associated with chloroform that few remember that the famous obstetrician, the centenary of whose birth takes place on June 7th, had anything to do with ether as an anaesthetic. And yet he had much to do with it. When in January, 1847, he introduced the use of anaesthesia into midwifery practice ether was the anaesthetic he employed, and he continued to administer ether until the November of the same year, when he was led, for various reasons, to prefer chloroform, and to substitute it for ether. That these facts have been overlooked is evident from a reference to recent works on midwifery published in this country (where such facts certainly ought to be known) and in other lands. Thus one writer [1] has this sentence:

> Since the introduction by Sir James Y. Simpson of anaesthesia by chloroform in midwifery the pain can always be kept within reasonable limits.

And other authors are evidently unaware that the use of ether in midwifery practice in Great Britain [illegible] employment for the same [illegible] William[illegible]

early life; and the promontory of the sacrum could be felt projecting so far forwards as to diminish the conjugate diameter of the brim of the pelvis to about 2½ in.

After telling of the craniotomy which had to be performed at the first confinement, the account goes on to record:

> On the present occasion (her second labour) the umbilical cord was found presenting, with the head lodged high upon the brim, where it remained without making the slightest progress for several hours or offering at all to pass down into the pelvic cavity. Dr. Simpson had, upon the results of some previous cases of a similar kind, resolved to avoid, if possible, the use of the crotchet or other instruments, and to extract the child by turning. He effected this by grasping easily one knee; but after the body and extremities were born extreme exertion was subsequently necessary to extract the head. . . . The child gasped several times after birth, but respiration could not be established. Some time before the turning was attempted the woman was fully placed under the influence of sulphuric ether. During the whole operation she was (according to her own subsequent reiterated declaration and surprise), quite unaware of feeling any pain, or having any sensation whatever, and awoke just as the delivery was being terminated. . . After she was brought under the influence of the ether the uterine contractions continued regularly, but without knowledge or consciousness of pain on the patient's part. She is making the best possible recovery. Dr. Zeigler, Dr. Keith, and Mr. Figg were present throughout the progress of the case.

The para[illegible]

We published some time ago the results of analysis of Burgess' Lion Ointment, and the Pills are a companion

BURGESS' LION PILLS.

presence of mercury or calomel was detected.

modifying and annulling the pains of labour, will (I have repeatedly heard the question asked) the state of etherization ever come to be generally employed with the simple object of assuaging the pains of natural parturition? Or (as the problem has not unfrequently been put to me), should we be "justified" in using it for such a purpose?

In a few paragraphs containing much that he was afterwards to expand into more complete propositions, Professor Simpson sketched the argument for affording relief from pain to parturient women, and he ended with the statement:

> Instead of determining . . . whether we shall be "justified" in using this agent under the circumstances named, it become, on the other hand, necessary to determine whether on any grounds, moral or medical, a professional man could deem himself "justified" in withholding, and not *using* any such safe means, as we at present presuppose this to be.

It is, to say the least, remarkable that Simpson should, within a month of his first use of an anaesthetic in midwifery, have so logically foreseen the possible objections to, and risks in, the administering of ether in labour, and have so clearly estimated the probable extension of its employment to cases of natural labour. As we have said, it was not till November 4th, 1847, that Simpson, with Keith and Matthews Duncan, discovered the anaesthetic properties of chloroform, and began to use it in place of ether as more potent, portable, and pleasant; and during the intervening months he was steadily employing ether himself and recommending it to others, as he himself stated in his paper read before the Medico-Chirurgical Society of Edinburgh in December, 1847.

Professor Simpson's first case of etherization in midwifery seems to have been made known also through the public journals, and on January 26th an unsuccessful attempt was made in St. Bartholomew's Hospital, London, to etherize a patient upon whom Caesarean section was about to be performed. About the same time—that is, about a week after its use in Edinburgh—Fournier Deschamps employed it in a forceps delivery in Paris (January 27th), and Dubois gave it in a similar case on February 8th. On February 13th Dr. Murphy of London stated that he had used ether in a case of turning. In Germany the first case seems to have been that under Professor Martin of Jena on February 24th; it was an instance of adherent placenta. In America Dr. Channing, Professor of Midwifery in Harvard University, employed ether in a forceps case on May 5th; and the first patient delivered under an anaesthetic in Ireland was a woman under the care of Dr. Tyler of Dublin on November 28th, a forceps case. These are the facts regarding priority as published by Simpson in October, 1848.[2]

It must not be forgotten, further, that it was in defence of ether, not in the first place of chloroform, that Sir James Simpson constructed those logical, pungent, and humorous arguments which did so much to place anaesthesia in midwifery practice on a sure and sound basis.

LONG AND ANÆSTHESIA.

To the Editor of THE LANCET.

SIR,—In my brief note in THE LANCET of Oct. 31st I was not discussing the history of anæsthesia but referring only to Sir James Y. Simpson's relation to the subject. Long's claims are an old story, which anyone may read at length in Dr. Hugh Young's article in the Johns Hopkins Hospital Bulletin, Vol. VIII., p. 174. Everyone will, I think, agree with the following judgment of Professor Welch:—

"The honour of making the first trial of anæsthetic inhalation in surgical operations belongs to Dr. Crawford W. Long, a respected and honorable country doctor, then living in Jefferson, Jackson County, Ga., who, in March, 1842, removed painlessly a small tumour from the neck of James M. Venable, anæsthetised by ether. He seems to have performed at least eight minor surgical operations during the next four years upon patients under the influence of ether. Dr. Long is necessarily deprived of the larger honour which would have been his due had he not delayed publication of his experiments with ether until several years after the universal acceptance of surgical anæsthesia. It is also to be regretted that his published details of the mode of administering the ether and the depth of the anæsthesia are so meagre and unsatisfactory. While the accepted rule that scientific discovery dates from publication is a wise one, we need not in this instance withhold from Dr. Long the credit of independent and prior experiment and discovery, but we cannot assign to him any influence upon the historical development of our knowledge of surgical anæsthesia or any share in the introduction to the world at large of the blessings of this matchless discovery."

Surgical anæsthesia as a practical procedure dates from Oct. 16th, 1846, when William Morton, in the Massachusetts General Hospital, Boston, gave ether to Gilbert Abbott, upon whom Dr. John Collins Warren performed a painless operation.

I am, Sir, yours faithfully,

Oxford, Nov. 16th, 1914. WILLIAM OSLER.

15 Upper Berkeley Street,
Portman Square W.

13/11 14

TELEPHONE 1623 PADDINGTON.

15, UPPER BERKELEY STREET,
PORTMAN SQUARE. W.

Dear Sir William Osler,

Sir J. Y. Simpson and anaesthesia.

Douglas Powell says in the Lancet today that my letter of Nov. 7th "Corrects the Regius Professor"!

Obviously, it does nothing of the kind — It only points out that Simpson's conclusion that Morton was the first to use Ether as an anaesthetic

was wrong. If you
think I might to write to
the Laurel Wray this, I will
do it at once

Sincerely yours

Leonard Guthrie

my life out here". One can only hope that all these gallant young fellows have felt as he did.

Sincerely yours

Leonard Guthrie

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TELEPHONE 1623 PADDINGTON.

15, UPPER BERKELEY STREET,
PORTMAN SQUARE. W.

Dear Sir William Osler,

So glad you will set matters aright in the Lancet. Douglas Powell made me feel hot all over. - All the same, I did want to draw you into telling us some more.

I have not the faintest idea whether Massie's & Dixon's line is equatorial or commercial.

The meeting of the Hist. Section is on Wednesday 18th not Thursday - I hear that -

Ernest Clarke, Alfred Perceval Graves & R. Ash King are coming to hear Crawford - paper - They will have to be welcomed from the Chair -

I expect poor Norman Moore will be there. It would not be like him to stay away -

It is terrible to hear almost every day of the sorrow of one's friends - Yet I was told that A. W. Pollard's son wrote to his parents on the eve of his last fight:- "If I am killed it will comfort you whenever that I have had the time of

14
19

PS. The Versal. Celebration must be off for the present - but I think we shall have enough material for our meetings -

THE DISCOVERY OF CHLOROFORM.

We learn from Mr. Alexander Spence, member of the Pharmaceutical Society and ex-bailie of the Royal Burgh of Linlithgow, that it is proposed to commemorate the centenary of the birth of Mr. David Waldie, who suggested the use of chloroform as an anaesthetic to Sir James Simpson. There has been a great deal of misunderstanding and controversy about this matter, and it is difficult, as it usually is in such matters, to get at the exact truth. We took considerable trouble to ascertain the facts in preparing an article on the history of anaesthesia which appeared in the JOURNAL of October 17th, 1896. Of the original experimenters, the only survivor at that time was the late Dr. George Keith, who wrote characteristically that it would be better if the whole business were buried in oblivion! Simpson's own account is as follows: "Latterly, in order to avoid, if possible, some of the inconveniences pertaining to sulphuric ether, particularly its disagreeable and persistent smell, its occasional tendency to irritation of the bronchi during its first inspirations, and the large quantity of it required to be used (more especially in protracted cases of labour), I have tried upon myself and others the inhalation of different other volatile fluids, with the hope that some one of them might be found to possess the advantages of ether without its disadvantages. For this purpose I selected for experiment and have inhaled several chemical liquids of a more fragrant or agreeable odour, such as chloride of hydrocarbon, etc. Then Mr. Waldie, a Linlithgowshire man, first named perchloride of formyle as worthy, among others, of a trial." Dr. Jacob Bigelow, of Boston, and Mr. Jacob Bell, a well-known London pharmacist, had both previously tried chloric ether, and Mr. Bell's experiments had been so successful that Mr. Lawrence used it in surgical operations. Bell, however, failed to recognize that it was the chloroform in the chloric ether which produced anaesthesia. Mr. Waldie, who was then connected with the Apothecaries' Company at Liverpool, seems to have guessed that chloroform was the active agent, and he promised to procure some for Simpson. There was, however, some delay in carrying the promise into effect, and in the meantime Simpson, who was not a man to let the grass grow under his feet, got some chloroform from Messrs. Duncan and Flockhart, of Edinburgh, and forthwith began to experiment with it on himself and his assistants, George Keith, Matthews Duncan, and others. The first trial of chloroform was made in Simpson's house on November 4th, 1847, and Miss Eva Blantyre Simpson, in her *Life* of her famous father, quotes the following passage from a letter written by him to Mr. Waldie: "I am sure you will be delighted to see part of the good results of our hasty conversation. I had the chloroform for several days in the house before trying it, as after seeing it such a heavy unvolatile-like fluid, I despaired of it, and went on dreaming about others. The first night we took it, Dr. Duncan, Dr. Keith, and I all tried it simultaneously, and were all 'under the table' in a minute or two."[1] Let Mr. Waldie have all the credit of having suggested the use of chloroform. We therefore hope that the movement to place a bronze tablet, with a suitable inscription, on the house in Linlithgow where he lived, will receive the support of the medical profession. It is somewhat unfortunate, however, that in recent years exaggerated claims have been made on Mr. Waldie's behalf. He did not discover chloroform, which as a chemical substance was identified independently by Soubeiran in 1831, and Liebig in 1832. Nor was he the first to discover its anaesthetic properties. On March 8th, 1847, J. P. Flourens read a paper before the Académie des Sciences on the effects of chloroform on the lower animals, but as in the case of Humphry Davy's discovery of the pain-subduing power of nitrous oxide gas in 1800, no notice

[1] For a full account of the discovery of chloroform see BRITISH MEDICAL JOURNAL, October 17th, 1896.

or even showed that chloroform possessed anaesthetic properties, however, it is certain that its use in surgery and obstetrics was established by Simpson, but for whose brilliant and strenuous advocacy the agent would in all probability never have gained a footing in medical practice. It was his daemonic force that beat down all opposition, and it must be remembered that he had many powers of darkness—within as well as without the profession—to battle against. Therefore, James Young Simpson is truly entitled to be called the discoverer of chloroform.

THE WELFARE OF THE DEAF.

In the third of the series of lectures which Dr. Kerr Love, of Glasgow, is delivering at the Royal Sanitary Institute, under the auspices of the National Bureau for Promoting the General Welfare of the Deaf, the speaker claimed that if deafness was to be prevented there must be decent and healthy conditions for the children of the poor during the first years of life. Like a plant or other young animal, they must have room to grow, and simple, clean, and free conditions of life. This was the first step for the prevention of infantile or sporadic congenital deafness. This view was based on an inquiry into the home conditions of the inmates of the Glasgow Institution for the Deaf, numbering 180. The children whose homes were in Glasgow numbered 76, and in these homes grave conditions of overcrowding existed, the average number of inmates to each apartment being 3.145. Dr. Kerr Love did not claim that overcrowding was itself a cause of deafness, but that it connoted various unfavourable circumstances and direct causes, such as uncontrolled use of alcohol, parental neglect, and untreated syphilitic disease. It was to untreated syphilis that he pointed as the probable cause of a vast proportion of all cases of deafness observed during the first months of life, and he supported this suggestion by some twenty family records relating to cases in which the Wassermann test had been applied to every living child, and whenever possible to the mother. In these twenty families there had been 167 pregnancies, 93 children being still alive, and 74 had died in childhood, or had been born dead. Among the 93 living children as many as 30 were either deaf or blind, while many others presented, apart from a positive Wassermann reaction, other evidences of syphilitic inheritance. Dr. Kerr Love also suggested that untreated syphilis in the parents and unrecognized syphilis in the children probably lay at the root of much of the meningitis to which so many children succumbed. The remedy which he put forward was notification of syphilis whenever it appeared in children, followed by the immediate treatment of both mother and children. Even if fresh legislation were necessary for the purpose the cause was urgent enough to warrant it, but as a matter of fact recent legislation had placed the machinery required ready to hand. "Like most of my profession," he said, "I have many faults to find with the National Insurance Act. But maternity benefit will be claimed, even for dead-born children, and for all children who die shortly after birth; and if the Commissioners insist of a certificate of the cause of death, the syphilitic families will be discovered, and without any public disclosure of the reason for the step, treatment will be instituted which will counteract the poison in the blood of the mother, and will save the children of the future. The disease is very amenable to treatment, and it is because it is untreated that it passes down to the children."

PHARMACY REGULATIONS IN NEW ZEALAND.

In the autumn session of the House of Representatives of New Zealand this year two new clauses were introduced into a Pharmacy Bill then under its consideration. Briefly summed up, they made it an offence for a registered chemist to pay to any medical practitioner any money or

We learn from Mr. [illegible] Pharmaceutical Society and ex-bailie of the Royal Burgh of Linlithgow, that it is proposed to commemorate the centenary of the birth of Mr. David Waldie, who suggested the use of chloroform as an anaesthetic to Sir James Simpson. There has been a great deal of misunderstanding and controversy about this matter, and it is difficult, as it usually is in such matters, to get at the exact truth. We took considerable trouble to ascertain the facts in preparing an article on the history of anaesthesia which appeared in the JOURNAL of October 17th, 1896. Of the original experimenters, the only survivor at that time was the late Dr. George Keith, who wrote characteristically that it would be better if the whole business were buried in oblivion! Simpson's own account is as follows: "Latterly, in order to avoid, if possible, some of the inconveniences pertaining to sulphuric ether, particularly its disagreeable and persistent smell, its occasional tendency to irritation of the bronchi during its first inspirations, and the large quantity of it required to be used (more especially in protracted cases of labour), I have tried upon myself and others the inhalation of different other volatile fluids, with the hope that some one of them might be found to possess the advantages of ether without its disadvantages. For this purpose I selected for experiment and have inhaled several chemical liquids of a more fragrant or agreeable odour, such as chloride of hydrocarbon, etc. Then Mr. Waldie, a Linlithgowshire man, first named perchloride of formyle as worthy, among others, of a trial." Dr. Jacob Bigelow, of Boston, and Mr. Jacob Bell, a well-known London pharmacist, [illegible]

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58 BEACON ST.

Boston, Mass., U. S. A.,

Nov.27, 1914.

My dear Osler:-

I read with much interest your note in the Lancet for October 31st, 1914, referring to Sir James Y. Simpson and anaesthesia.

I presume Sir R. Douglas Powell's attributing the discovery to Sir James came about in this wise. Early in the '70's Dr. Henry J. Bigelow was much interested in the history of anaesthesia and I think was preparing a centennial article for the American Journal of Medical Science. In looking up what the Encyclopedia Brittanica had to say on the subject, he was surprised to find the following, "Anaesthesia, see chloroform." This was all, apparently, that the great English authority had to say about a word which had been coined by Oliver Wendell Holmes to meet the occasion of the first use of ether at the Massachusetts General Hospital on October 16, 1846.

It was about the date to which you refer that Dr. Bigelow asked me to write to Mr. Lister, then at Edinborough, in reference to preparing an article in which I think he intended to take Sir James Simpson to task. Curiously enough the day before I read your note, I placed my hand accidentally on Lister's reply to me, in which he said that, owing to the very serious illness of Simp-

Sir William Osler, Bart.

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son, he thought it inadvisable to do anything about it as that time. This was in 1870.

At the time of our Jubilee of Anaesthesia, Dr. A. R. Simpson of Edinburgh, in regretting his inability to be present at the celebration, wrote to me, saying, "Boston does well to commemorate the fiftieth anniversary of the day on which Dr. Morton first gave a public demonstration of the practibility of surgical anaesthesia, and so put into the hands of his professional brethren the means of saving the patient from untold suffering."

I well recall an interesting conversation I had with a member of the staff of the Massachusetts General Hospital when we were making preparations for our Jubilee in '96, who asked me whether chloroform was used in London before ether had been in Boston. I replied to him that "I do not blame you, one of the younger members of the staff, for such an error, but I blame the hospital for not having heralded to the world what is its greatest historical asset." Hence the significance of our Jubilee and the subsequent and now well-established function of **Ether Day.**

The number of the Lancet containing Guthrie's article for November 7th has just come to hand. I think Dr. Welch's paper states the case very fairly in regard to Long. Associated intimately as I was with many of those concerned in the introduction of surgical anaesthesia, I never heard of Long's name even until all of them, except Dr. Bigelow, were dead.

Sincerely yours,

J. Collins Warren

Sir William Osler, Bart.

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No. 1437 (3)

Mss. in Sir J. Y. Simpson's handwriting.
sent to me (W.O.) by Sir Alex. Simpson

The whole evidence ~~offers~~ goes to show that the high & whole credit of the practical application of sulphuric ether to anaesthesia in dentistry & surgery ~~belongs~~ pertains to Dr Morton, & was worked out by him in the latter part of 1846. Dr Jackson suspected or believed that the vapour of sulphuric ether would produce insensibility to pain in dental & surgical operations, but he never so far as made any efforts to test the idea practically; & Dr Morton ~~knew the powers of sulphuric ether before~~ seems indeed to have doubted the safety of Dr Morton's use of it in the first surgical cases in which Dr Morton employed it. Dr Morton was no doubt acquainted with the effects of sulphuric ether, & had administered it before he had his conversation with Dr Jackson on the subject

But the idea of producing a state of insensibility
by the inhalation of gaseous was worked out and applied
practically one or two years before, or in 1844 or 45,
by Dr Horace Wells, a dentist, of Hartford who was a partner
in business with Dr Morton, & who doubtless imparted the
notion to him. Dr Wells failed because he resorted
to nitrous oxid gas, an agent which
was not so easy to procure in sufficient quantity & purity
& was more difficult to use with certainty than the
vapour of sulphuric ether. But he taught, however,
the use of sulphuric ether; but did not use it as he apparently considered
it would be too dangerous. Dr Horace Wells & Dr
Morton were also with Dr Wells when he made
an unsuccessful attempt to use nitrous oxid in a surgical
case in the Massachusetts Hospital in 1844. Again the
notion of using nitrous oxid to produce insensibility
in dentistry if not in surgery appears

appears to have been imparted to Dr Wells by Dr Cooley another dentist, who derived it from observing a friend of his take at a public lecture or exhibition a dose of nitrous oxid gas ~~when~~ under the ~~exhibi~~ action of which he kicked out & broke his shins, but felt no pain from the injury in consequence of the benumbing influence of the gas, - rather a ludicrous origin, perhaps ~~&~~ both for modern anaesthetics. But it must not be forgotten that the minds of many men had been called to the question at that time in consequence of the alleged anaesthetic power of animal magnetism & the reports of grave operations ~~pro~~ performed without pain upon patients when under its influence

No. 1485

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An 36 (4)

No 1485
Simpson
Galley proof.

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No. 1485

My Dear Sir—A few months ago I saw in an American general newspaper the gratuitous attack upon me which you had published in the *Boston Medical Journal*, but of which you had forgotten to send me either an intimation or a copy—doubtless from accident and not from intentional discourtesy. Towards the beginning of the present year, I sent, in reply to your groundless accusation, an answer in the form of a letter to yourself; and subsequently I received from you a written note in which you stated you were "not disposed to pursue the subject further." In consequence, I dismissed the matter entirely from my mind; and I deeply regret, both for your own sake and for the peace and character of our [redacted] honourable profession, that you have not adhered to your resolution. For I have just received a slip of printed statement, unaccompanied by one word of writing, but drawn up in the form of another letter from you to me, in which you continue the subject in terms perhaps still more bitter and personal than before. On first perusing it, my impression was that it was too frivolous in tone and temper to deserve an answer. I then thought of sending back a reply to you, stating, simply and briefly, that the new imputations in it were, one and all of them, without a shadow of foundation in fact, and even more worthless than those in your first. But, on reperusing it, it struck me that you were considering yourself a representative and champion of the Boston School of Medicine, and that it might be well, once for all, to answer even more fully and perfectly than I had done; and thus show, in my opinion, the great things which the Boston School had done, and had not done, in the cause of anæsthesia, and how mistakes and errors might possibly have originated on the subject, between your city and other places, which I [redacted] trusted could be fully removed. Hence pardon me the following observations.

1*st.—Tendency to confusion from the discovery of Chloroform rapidly following that of Sulphuric Ether.*

From some communications which I have lately received from America, I find that your observations have stirred up there, in some minds, the idea that I have held up the introduction of chloroform as an anæsthetic in Edinburgh to be antecedent, in point of time, to the introduction of sulphuric ether in Boston. I feel sure that you and I will mutually agree that never anything so wild or extravagant was hinted or suggested by either of us. The first case of an anæsthetic operation under sulphuric ether occurred at Boston on the 30th September 1846. The first case of an anæsthetic operation under chloroform occurred at Edinburgh on the 15th November 1847. During the intervening thirteen months, I had worked much with sulphuric ether in midwifery, etc., and some of our surgeons, here and elsewhere, had used it more or less extensively; but it was not by any means adopted by all.

At the same time, you must allow me to remark that the ideas on the subject in your own mind, which have excited you to write [redacted], have, it appears to me, become chiefly bewildered and confused in consequence of one thing—namely, of the rapidity with which chloroform thus followed as an anæsthetic after the discovery of sulphuric ether; and in consequence also of the relative practical adaptability and superiority of the former in many respects; and hence of its general and speedy substitution in Europe, Asia, Australia, etc., for the latter.

In the *Dispensatory of the United States of America*, Drs. Wood and Bache, when speaking of the use of sulphuric ether for inhalation in medicine, observe: "Many years ago [1796, etc.] its use in this way was proposed by Drs. Beddoes, Pearson, and Thornton, in England, as a remedy in certain diseases of the lungs. As early as 1805, Dr. Warren of Boston employed ethereal inhalation to relieve the distress attending the last stage of pulmonary inflammation. About the year 1812, in Philadelphia, at a time when nitrous oxide was the subject of popular lectures, the vapour of ether was frequently breathed from a bladder for experiment or diversion, and its effects in producing a transient intoxication analogous to that caused by the nitrous oxide were observed." Now, if in Boston in 1805, or in Philadelphia in 1812, the inhalation of sulphuric ether had been tried to a sufficient depth for its anæsthetic effects to be discovered in dentistry and surgery,—while the superior anæsthetic powers and higher practical properties of chloroform in midwifery as well as in surgery remained undetected till 1848,—then all this storm of mist and obscurity, which has been attempted within the last few months to be stirred up on the matter, would have been an entire failure, or indeed an entire impossibility. For while the glory of first discovering the induction of surgical anæsthesia by sulphuric ether would have been, as it undoubtedly is, American in its birth-place and origin, a Lord Provost of Edinburgh in 1869—or 40 or 50 years afterwards—knowing and looking to the fact that chloroform in Scotland and in other parts of Europe, etc., had for the previous 20 years, if not entirely, yet nearly entirely, superseded the use of sulphuric ether, and by its general adoption diffused greatly and everywhere the practice

of anæsthesia—might surely, without challenge and recrimination on your part, have ventured to speak of "the discovery and application of chloroform to the assuagement of human suffering" as the greatest of all discoveries in modern times in connection with medicine."*

An illustration, however, may show my meaning better than an abstract statement. We have now at present in practice various means of abolishing the pain attendant upon surgical operations, as nitrous oxide gas, sulphuric ether, chloroform, etc.; and the olden surgeons had others. We have various means also of arresting the hæmorrhage attendant upon these operations, as cauterisation, torsion, deligation, acupressure, etc. These hæmostatic means all arrest hæmorrhage by closing up, in one way or other, the open mouths of the cut vessels. They get at one and the same end by three or four different means; but because these means have been suggested at three or four different and distant times, any one displacing the former does not generally require to be apologised for and denounced, as you seem rather to think ought to be the fact in the case of anæsthetics. Or take another illustration:—The greatest thought ever perhaps broached in practical medicine, was the suggestion in relation to small-pox,—and to probably other fatal diseases, destined to occur only once in life,—that their severity and fatality might be averted, if, instead of the contagious poison producing them being allowed to enter in limitless quantities into the body by respiration, it could be inserted in very small and definite quantities by inoculation through the skin. Hence small-pox inoculation, and the wonderful protection obtained by it against the fatality of small-pox, an idea brought from Asia and Turkey, and commenced in England in the beginning of the last century. Ere, however, the century was closed, a new variety of matter was proposed to be inoculated by Dr. Jenner, and proved infinitely a greater success. The material used by the old Asiatic and Turkish inoculators was small-pox matter taken directly from pustules on the bodies of human beings who were infected with small-pox. The material used by Jenner was small-pox matter taken from the pustules produced on the udders and nipples of cows who were infected with small-pox poison. That vaccination was thus a modification of small-pox inoculation, has never, however, been allowed to detract one iota, I believe, from the merit of the great pathological and practical revolution produced by Dr. Jenner. And the two discoveries, or two prophylactics against small-pox, the Asiatic and English, have never clashed and been entangled together: for they were in our own country upwards of half-a-century or more separate from each other in the date of their introduction and discovery. Neither, I think, would the relative merits of the two anæsthetics, the American and the English, sulphuric ether and chloroform, have been commixed in the manner in which they have been confused by you and others, had their discoveries been separated by upwards of half-a-century also.

2*d. Earliest Anæsthetic operations in America, and their connection with Hartford and Boston.*

At the present time three kinds of anæsthetics are principally and specially used in practice, viz.—

1. *Nitrous oxide gas*, now, I believe, employed ~~many~~ extensively in dental surgery, etc., since it was reintroduced a few years ago by Dr. Evans, of Paris; but originally suggested by Sir Humphrey Davy in 1800, and practically and successfully employed by Dr. Horace Wells in Hartford, in 1844.
2. *Sulphuric ether*, first used by Dr. Morton, at Boston, in 1846.
3. *Chloroform*, first employed in Edinburgh in 1847.

There have been latterly used, also, from time to time, various minor anæsthetic agents, but none of them, I believe, to any great practical extent; though in all likelihood some will yet be discovered with qualities superior to any we as yet know. In my former letter to you, and on different other occasions, I have, with other writers, shown that the ancient surgeons—Mediæval, Roman, and Greek—were long employed in the search after surgical anæsthetics, and so far succeeded, by making their patients inhale the fumes of narcotic vegetable extracts, drink solutions of them, etc. etc. Apparently afraid that the history and uses of these olden surgical anæsthetics would detract from the merit of the Medical School of Boston in the great discovery of the anæsthetic properties of sulphuric ether, you bitterly denounce in your letter to me the study and consideration of them. Rest assured that no wishes or declamations, either on your part or mine, will wash out or obliterate that or any other points of the past history of surgery. "I did not desire," you exclaim, "to provoke this mediæval history." But was not your *sole* cause of complaint against me this—that in speaking to the Town Council of Edinburgh one or two sentences regarding chloroform, I omitted, most erroneously in your

* See the report of the Lord Provost's speech as given in the *Scotsman* of 27th October 1869.

opinion, to refer to, or speak of, the past history of anæsthetics? "Your prolix mediæval history," you again querulously complain, "is simply irrelevant, and its application illogical." It is in no degree illogical; but I believe with you it would have been quite irrelevant if brought before the Town Council of my native city. My letter to you, as you further again bitterly observe, is "occupied with a cloud of antiquarian dust, of which the only apparent result is to obscure the truth and create a confusion in the mind of the readers, in the midst of which chloroform may be advantageously introduced." Surely, my dear sir, this undignified and calumnious sentence is unworthy alike of the heart and of the pen of Dr. Jacob Bigelow, and requires no answer from me.

But, dismissing the history of the olden forms of anæsthetics, let me direct your attention for a moment to an episode in their more modern history connected with Boston and its Medical School. You properly claim for yourselves great and vast merit from the discovery and application of sulphuric ether in dentistry and surgery. Indeed, you almost seem to me to insinuate in your letter that the medical world should have been ever afterwards contented to use sulphuric ether, and it alone. I think, however, Dr. Channing alludes to you yourself using chloroform in some midwifery cases; and early in the practice of etherisation in midwifery, I found that no busy obstetric practitioner could extensively employ sulphuric ether without inevitably carrying about with him, and upon his clothes, an odour so disagreeable to many other patients and other houses, as to make his presence there ought but desirable. Other Boston surgeons have tried, at least, other anæsthetics besides sulphuric ether, as if they did not look upon it in the way of perfection, as you do. I have read of your accomplished son, Dr. Henry Bigelow, excising the mamma after he had placed the patient under the anæsthetic influence of nitrous oxide gas. In your two late articles you have carefully eschewed all reference to this last special anæsthetic, in despite of its being now largely and successfully employed in Paris, London, and elsewhere in tooth-extraction. I wish, on the contrary, to recall your attention particularly to it. For let me here put you in mind that the first anæsthetic operation under sulphuric ether at Boston occurred on the 20th September 1846, when Dr. Morton drew a tooth from the head of Eben Frost, who had been previously placed under the influence of the anæsthetic vapour. Nearly two years previously, however, or on the 11th December 1844, the same anæsthetic operation was as successfully performed at Hartford, the anæsthetic inhaled being not sulphuric ether but nitrous oxide gas, and the patient being Dr. Wells himself,* to whose mind the idea had suggested itself on the night previously, that a person under a deep dose of nitrous oxide would not feel, when in that state, the pain of tooth-drawing and other operations, because he had seen Mr., now Colonel, Cooley wound his limbs severely against the benches without feeling any suffering from these injuries.†

A short experience soon satisfied Dr. Horace Wells and others that teeth could in this way be extracted without pain.‡ His friend Dr. Riggs drew six teeth from one patient, at one sitting, without any suffering whatever. During this time also he seems to have discovered the great point which we now know to be so essential in the successful exhibition of nitrous oxide—namely, that it should be breathed as pure as possible, and without any mixture of atmospheric air.§

It is perhaps here unnecessary to add that there is sufficient evidence that Drs. Wells, Marcy, and Goodrich debated the question together whether sulphuric ether would not be an agent preferable to nitrous oxide in these experiments (see *Official Documents*, Appendix, pp. 87, 111, 114); but Marcy thought nitrous oxide the safer and pleasanter of the two, and also more easy to inhale. In the Essay in which your son first describes the inhalation of sulphuric ether in surgery, he points out its similarity to nitrous oxide.‖ "Ether inhaled in vapour," he says, "is well known to

* The account which Dr. Riggs has given, in his official examination in 1852, of this first anæsthetic operation in America is sufficiently graphic. Messrs. Cooley, Wells, Collin, etc., were present. Dr. Riggs says: "A few minutes after I went in, and, after conversation, Dr. Wells took a seat in the operating chair; I examined the tooth to be extracted with a glass, as I usually do; Wells took a bag of gas from Mr. Colton, and sat with it in his lap, and I stood by his side; Wells then breathed the gas until he was *much* affected by it; his head chopped back, I put my hand to his chin; he opened his mouth and I extracted the tooth; his mouth still remained open some time; I held up the tooth in the instrument, that the others might see it; they standing, partially behind the screen, were looking on. Dr. Wells soon recovered from the influence of the gas, so as to know what he was about, discharged the blood from his mouth, swung his hand, and said, 'A NEW ERA IN TOOTH-PULLING.' He said it did not hurt him at all. We were all much elated, and conversed about it for an hour after."—(See Appendix, Dr. Colton's *Statements*, p. 95.)

† This occurrence took place at a public exhibition of, and lecture on, laughing gas, at Hartford, by Mr. Colton. The advertisement for Mr. Colton's lecture, published in the *Daily Times* of December 10, 1844, has been republished in the *Daily Journal* for February of the present year. "The entertainment," says the advertisement, "is scientific to those who make it scientific." For a full account of the effects produced by the gas upon some of the most distinguished men in Europe, Mr. Colton refers to Hooper's *Medical Dictionary*, where an abstract of the experiments of Sir Humphrey Davy is given.

‡ In his pamphlet, and elsewhere, Dr. Wells brings forward sworn affidavits, from different patients of the anæsthetic effects of the nitrous oxide gas. Thus, for example, Mr. Burleigh states that, after having had an opportunity of witnessing its effects on several persons, he himself breathed it, and he adds, "two carious teeth were extracted from my lower jaw without the least suffering on my part, though, ordinarily, owing to the firmness with which my teeth are fixed in my jaw, I suffer extreme pain from their extraction."

"Dr. Wells," states Mr. Goodrich, "was most successful in extracting for me a large, firmly-set, bicu tooth, without the slightest sensation of pain. I also witnessed, soon after, a repetition . . . same process by Dr. Wells upon several individuals, accompanied in every instance with perfect success."

§ See Dr. Morton's volume of *Official Documents*, p. 29, etc. "The less atmospheric air is admitted into the lungs, with any gas or vapour, the better—the more satisfactory will be the result of the operation." Dr. Morton, unaware of the rules for breathing nitrous oxide, denounces this observation of Dr. Wells as "inconsistent with fact."

‖ In the volume of *Official Documents*, p. 372, there is one case entered, suggested in the same way as Colonel Cooley's, with nitrous oxide. A young gentleman, ten years since, who is now a physician, was inhaling ether for amusement, as was the custom at Harvard College. He took enough to make him so insensible that he fell upon the floor. In falling he cut his head badly. On recovering he was unaware that he had injured himself at all.

produce symptoms similar to those produced by the nitrous oxide" (see Paper read before Boston Society of Medical Improvement, 3d November 1846). But the step from *using* nitrous oxide to using sulphuric ether was great and momentous in its results. Dr. Morton, who, as his friend and old partner, assisted at Dr. Wells's experiment at Boston, no doubt knew all the results obtained at Hartford, where he twice visited Dr. Wells after 1844 ; and he evidently, betimes, got the speculation into his mind that sulphuric ether might prove successful. From a different line of observation, Professor Charles Jackson entertained the same speculation. Assisted, apparently, by one or two hints from Dr. Jackson regarding the pure quality of the ether, or, possibly, its best mode of exhibition, Dr. Morton verified the speculation on the 30th September 1846, and fixed that date as an era in science.

Elated with his discovery, he in a week or two proceeded to Boston, in order to lay it before the medical faculty there, and show its effects ; and first made it known there—according to his own account—to Drs. Warren, Heyward, Jackson, and Morton, the last gentleman being a former pupil and partner of his own, and destined to be the future discoverer of anæsthesia by sulphuric ether.*

A case of amputation was about to be performed by Dr. Heyward in the Massachusetts Hospital, but was put off for some days. After Dr. Wells had addressed Dr. Warren's class on the subject, it was proposed that the anæsthetic should be tried in a case of tooth-extraction. "Accordingly," writes Dr. Wells, "a large number of students, with several physicians, met to see the operation performed—one of their number to be a patient. Unfortunately," he continues, "for the experiment, the bag was withdrawn much too soon, and he was but partially under its influence when the tooth was extracted. He testified that he experienced some pain, but not as much as usually attends the operation." The audience pronounced it a humbug affair and an imposition, and Dr. Wells was hissed away, left Boston, and gave up, for a time, his profession with disgust and vexation. In these experiments, Dr. Wells, as I have said, used the nitrous oxide gas which in 1800 Sir Humphrey Davy had in England found capable in his own person of removing intense physical pain, and which he consequently suggested as "capable of destroying physical pain during surgical operations in which no great effusion of blood takes place." In your late letter to me, however, you maintain that "Sir Humphrey Davy," to quote your own extraordinary words, "must be exonerated from all practical knowledge of anæsthetic inhalation, otherwise he is chargeable with all the tortures of amputation and lithotomy which have taken place since he made the discovery and concealed it." You have used, I know, the same wild and irrelevant argument against Dr. Jackson which you here use against Sir Humphrey Davy, forgetting that their profession was that of chemists and not of surgeons. Have you really any hope or expectation that, either in Boston or elsewhere, such a violent observation as I have just now quoted, will blot out and erase in some cabalistic way the remarkable fact that Sir Humphrey Davy, seventy years ago, relieved intense physical pain in his own person by breathing nitrous oxide gas, or that he suggested that it might be used as an anæsthetic in some surgical operations, and published the suggestion ?

But now mark what subsequently occurs. An American dentist works out to its practical results the suggestion published in England half-a-century before by Sir Humphrey Davy, and which you seem to wish to ~~obliterate~~ efface from anæsthetic records, and travels a long distance to place the important result before the Medical School at Boston, and some surgeons of the Massachusetts Hospital. There is a slip in the single experiment allowed him. He is spurned and hooted away. In doing this the Medical School of Boston thus delays the whole subject of artificial surgical anæsthesia for a couple of years. Was not the Medical School of Boston then, in your strong language, "chargeable with the continuance of operative tortures" for that period, much more than Sir Humphrey Davy ? Did not your school stamp out, and thus prevent for two years the "most beneficent discovery," to use again your own grandiloquent words, "which has blessed humanity since primeval days of paradise ?"

3*d.*—*Etherisation, or Anæsthesia, in Midwifery.*

The first operations under anæsthetic inhalations in America occur, therefore, as we have seen in the last section, at Hartford, and not at Boston. In Hartford it was effected by an anæsthetic gas, long before suggested by Sir Humphrey Davy ; ~~in Boston by an anæsthetic vapour.~~ At Boston you retarded, for a time, the whole progress of anæsthesia, by rejecting the evidence of it offered you by Dr. Horace Wells. For, to quote the words of Dr. Riggs, "there (in your school) he met with a reception so cold that, after a single imperfect trial of the gas, amidst the sneers of those around him, he left Boston in disgust, and sick at heart at the unfair disposition manifested towards him." Besides erring in this ~~matter, I think~~ you and some of the Boston physicians have also erred in an opposite direction. For, after making the great discovery of the possible superinduction of anæsthesia by sulphuric ether, you seem inclined to hold that

* See the appendix to Dr. Morton's volume of *Official Documents*, pp. 11, 14, 15, etc. ; and Dr. Wells's pamphlet about the history of the discovery of the application of nitrous oxide gas, p. 6, etc.

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thousands might have done the same but did not do it.

the subsequent merit of everything connected with etherisation belongs to Boston exclusively.

The object of your first article on the present subject was to show that, because when I received the burghership of Edinburgh, I omitted to allude to the previous use of anæsthetics at Hartford and Boston, I was therefore deliberately guilty of trying to appropriate what belonged to my American brethren. In my reply to you, whilst showing that I was entirely guiltless of any such ~~thought or attempt at~~ appropriation, I pointed out that, strangely enough, you yourself were in the same article openly and flagrantly guilty of the unprofessional misdemeanour of which you accused me; for, in claiming, as you there did, for Boston the introduction of anæsthetic inhalations in obstetrical practice, you attempted to annex and appropriate to your country what most indubitably belonged to mine. In your last letter you begrudgingly state to me, "I do not *now* question that you were the first to use ether in labour;" and then you superciliously add, "but who first introduced anæsthetics in obstetrical practice is a matter of limited importance." According to the testimony, however, of our late mutual friend, Sir John Forbes, the application of anæsthetics to midwifery involved many more difficult and delicate problems than its mere application to dentistry and surgery. New rules required to be established for its use—the time during which it could be given—its effects upon the action of the uterus, upon the state of the child, and upon the parturient and puerperal state of the mother, etc., all required to be accurately studied ~~and ascertained~~. Moral and religious questions also came to be involved, and required to be duly answered. The Boston patent for its use, taken out by Drs. Morton and Jackson, did not, I believe, include its employment in midwifery; and your son, Dr. Henry Bigelow, weeks after it was first begun, deemed it only "adapted to operations which were *brief* in their duration, whatever be their severity. Of these the two most striking perhaps are amputations and the extraction of teeth."* But is its application to midwifery of limited importance, as now in the fervour of disputation you seem anxious to affirm? Your words in your first article regarding the commencement of anæsthetics in Boston are these:—That anæsthetic inhalation "began in this country, and was *first* used in the extraction of teeth, and afterwards [2] in capital operations in the Massachusetts General Hospital; and [3] in obstetrical practice." You adduce thus three kinds of practice in which it was used in Boston—namely (1) dentistry; (2) surgery; and (3) midwifery. You have omitted medicine, probably because you well knew the employment of inhalation of sulphuric ether had been introduced (as we have seen in a previous part of this letter) into medical practice by Dr. Pearson half-a-century before. Holding, as you now affect to declare, that the use of anæsthetics in obstetrical practice is a matter of limited importance, upon what ground, may I venture to ask, did you, only two or three months ago, in your first attack, adduce its application to midwifery as one of its three chief applications? Further, among these three applications, may I ask you, in all honour and honesty, is its use not, even in your opinion, a matter of infinitely less importance in dentistry than in midwifery? Of the relative value of any new practice, such as artificial anæsthesia, we are bound to judge its utility, not in any specialised practice, as that of a surgical hospital, but in the general practice of the general practitioner. Now most general practitioners have 20 or 30 cases at least of labour in which they may employ anæsthetics for every one case of surgery in which its use could be adopted by them, surgical cases being rare, and obstetrical cases common in general practice. You practise, and have, I believe, all along practised chiefly as a physician, and are hence, perhaps, no good judge in the matter; but let me extract for you from the volume of Official Documents published by your townsman Dr. Morton, the opinions of one or two general practitioners on the subject. "It is," says Dr. Appleton, "in obstetric practice that I have most frequently used these most valuable agents, and I regard their usefulness in this relation as among *the most* valuable results of their discovery." "In private practice," writes Dr. Ellis, "its *most* happy and beneficial effect is in obstetrics . . . . its benefit, if in no other, in this class of cases alone, *is the greatest discovery* in any age of the world for the relief of suffering humanity" (*see* vol. of Official Statements, pp. 180, 182).

* See the paper which he read five or six weeks after the introduction of sulphuric ether before the Boston Society of Medical Improvement, as cited in Brook's Essay on the Vapour of Sulphuric Ether, page 30.

You deem it a "matter of limited importance" who first introduced anæsthetics into midwifery. Perhaps it is so. But you will excuse me adding that at the time of the first application of anæsthesia to obstetrical practice amidst the hundreds and thousands of practitioners who were then engaged in midwifery ~~practice~~ in the old & the new world – it happened to be the first ~~doctor~~ who took up the subject & worked out ~~out~~ the things connected with it. Any one of these hundreds & thousands might have done the same but did not do it.

Let me here add that I would not have dwelt thus long upon the application of anæsthetics to midwifery—~~which any one of the thousands of obstetricians of America and Europe at that time might have found out, as well as myself, but did not~~—did I not feel compelled to add that other of your medical townsmen have seemed quietly on this head to ~~try~~ have tried like you also to appropriate to Boston what belongs to Edinburgh. Thus Dr. A. Gould, in his official deposition in 1852, speaks of "the first administration of ~~it~~ sulphuric ether in obstetrics by Dr. N. C. Keep of Boston" as "a similar step in the discovery" as anæsthesia in dentistry and surgery. In my former letter, however, to you, I showed you that Dr. Keep's case, here alluded to by Dr. Gould, did not occur in Boston till weeks and months after the practice of anæsthesia in obstetrics had been fully studied and established in Edinburgh. Besides, I find now, on looking over the large volume published on Etherisation in Midwifery, by my friend, and your townsman, Dr. Channing, that—avoiding all allusion to the midwifery cases reported, and the papers written upon etherisation in midwifery, in Edinburgh, weeks previously to the occurrence of Dr. Keep's case in Boston—he speaks also of Dr. Keep's as if it were the first instance in which ether had been employed in obstetrics. But this, perhaps, is merely an omission, as in a holograph inscription of his volume to me, Dr. Channing duly acknowledges that I was the first to introduce anæsthetics into obstetrical practice; and, in the dedication of his work, he speaks of midwifery as being a department which has derived "special and vast benefit" from the ~~discovery~~ application of anæsthetics.

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Dr. Keep's case happens to be described by Dr. Channing in such words as to leave it doubtful whether or not ~~his midwifery case~~ it was the first obstetric ~~case~~ instance in which Sulphuric Ether was given in ~~In~~ Boston or America only or in the world. Dr. Channings' account of it is as follows:— The Anaesthetic power of Sulphuric Ether, when inhaled, was first used in childbirth in this city, in a case of natural labour, on the 7th April 1847, by Dr. N. C. Keep, & was successful (Etherization in Childbirth by Channing p. 26).

4th.—Alleged neglect of American claims in writing a sketch of the history of Anæsthetics.

The chief or only subject of your attack upon me in your first article, was the frivolous allegation that, when last year I received the honorary burgess-ship of Edinburgh, and I had to speak on various and different topics, I omitted to do justice to your city and to America, by omitting to talk of the discovery of sulphuric ether as an anæsthetic when I was called upon to answer an observation of the Lord Provost's on chloroform.*

In your last letter, following out the same querulous strain of complaint, you argue that, besides the alleged omission in an *impromptu* speech, I was guilty, in an article which I had calmly written upon ~~the history of anæsthetics~~ in the *Encyclopædia Britannica*, of not doing "justice to the great American discovery." The article in question was printed in a volume of the *Encyclopædia* for 1854, and has been republished in a second volume of my works, collected and edited by Drs. Priestley and Storrer. In that article, after defining chloroform and stating its composition, modes of preparation, physical, chemical, and physiological properties, I have described the various therapeutic uses to which it, and consequently any other similar anæsthetic, could be applied in surgery, in midwifery, in medicine, and in medical jurisprudence; and ultimately I have occupied the last three columns of the article by a brief historical sketch of the various anæsthetic agents which have been used previously to the introduction of chloroform. And this historical sketch is the special object of your new attack.

In giving, in my lectures and otherwise, a history of anæsthetics, I have sometimes traced them from the earliest known periods downwards to the present day; but more frequently I have followed the inverse order, because I have found it more instructive and interesting—viz. that of tracing them gradually backwards from their most recent to their most ancient form. I have followed this last method in the said article in the *Encyclopædia Britannica*, and have hence first mentioned chloroform as then the most recent anæsthetic in the two following lines:—"The vapour of chloroform was first proposed by Dr. Simpson as an anæsthetic agent in 1847."

I then, after these two lines, give above twenty lines to sulphuric ether, beginning thus:—"For a year previous the vapour of sulphuric ether had been used to a considerable extent both in America and Europe, for the purpose of inducing insensibility to pain in surgical operations. It was first practically adopted for this purpose in 1846 by Dr. Morton, a dentist at Boston, in America. Subsequently Dr. Charles T. Jackson of that city claimed the right of having suggested to Dr. Morton sulphuric ether as an agent capable of producing insensibility to pain. But the power of producing by the vapour of sulphuric ether an insensibility exactly like that produced by the inhalation of nitrous oxide gas, had been long previously known," and so on through its history.† Thirdly, I allude to carbonic acid as suggested by Dr. Hickman in 1828; fourthly, to nitrous oxide gas as hinted at by Davy in 1800; fifthly, to compression of the nerves as used by Dr. Moor in 1784; sixthly, to compression of the carotids as suggested by Val Verdi and others in the sixteenth century; seventhly, to the fumes and extracts of mandragora, Indian hemp, and other soporific drugs, as practised by mediæval and ancient Roman and Greek surgeons.

Now comes your strong and strange accusation or accusations. For first you hold, as far as I understand you, that the article was written for my "self-exaltation," or to quote your own words, "in favour of the self-exaltation of the writer." Of any such object I know and feel myself to have been utterly guiltless, either in this or any other of my writings. In the whole course of this long encyclopædic article upon chloroform, if my object had been self-exaltation I might not unjustly have connected my name with several of the original suggestions and practices stated in the

* Lest there be any mistake regarding the grounds or supposed grounds of all the war which you have tried to stir up against me, let me here cite in full the Lord Provost's remarks on chloroform, and my reply to them. The Lord Provost, William Chambers, Esq., the well-known author and publisher, let me state, was one of the most intelligent and intellectual men of the age. His address to me in presenting the burgess ticket was spoken extempore, and I find that his words on chloroform are somewhat differently reported in our three morning journals. The version most favourable for you is the one you select—the *Daily Review*—and is as follows:—"I will not dwell on what you have accomplished in medical science. I will only allude to your discovery—the greatest of all discoveries in modern times—of the application of chloroform in the assuagement of human suffering. That was a great gift to mankind at large, and it well befits us, the Corporation of Edinburgh, to mark our sense of the great act of beneficence on your part by this small compliment." His Lordship subsequently alluded to my writings on Acupressure, Hospitalism, etc. etc.

With regard to the observations on Chloroform, I replied in the two following sentences:—"You adverted to the discovery of anæsthetic effects of chloroform. Perhaps you will allow me to state that there are various manufactories of it in Great Britain, and that a single one of these, located in Edinburgh, makes as many as eight thousand doses a-day, or between two million and three million of doses every year—evidence to what a great extent the practice is now carried of wrapping men, women, and children in a painless sleep during some of the most trying moments and hours of human existence; and especially when our frail brother-man is laid upon the operating table, and subjected to the tortures of the surgeon's knives and scalpels, his saws and his cauteries."—(See *Journal of the Gynæcological Society of Boston*, No. 6, p. 370).

† You underscore the expression used to a considerable extent, probably with a view of indicating that that is doubtful; but such, I believe, is the fact here and elsewhere in the first year of etherisation. In the *Edinburgh Medical Journal* for September 1847, I find it stated by me (p. 153) that, "during the last six months etherisation has been *used to a considerable extent* in British surgery." The editor of the same journal, in his December number—chloroform having been introduced in the interval—observes, "In Edinburgh it (chloroform) has been used publicly by all the surgeons of the Royal Infirmary [they had not all used ether], and its employment in midwifery practice is almost universal. Ether," he adds, "has almost been abandoned" (p. 456).

article, but I have mentioned my name only once, and that in the brief historical sentence already quoted, and when (I appeal to yourself or any honourable man) such mention was utterly unavoidable for the sake of simple historical accuracy.

But then comes your other accusation, that in enumerating the different methods of producing anæsthesia I have adduced chloroform *first*, sulphuric ether *second*, carbonic acid *third*, nitrous oxide *fourth*, etc., to "cover"—to use your own reprehensible words—"this inversion of historical order in favour of the self-exaltation of the writer . . . who availed himself of this opportunity principally to place himself conspicuously in the foreground."

Believe me, I feel difficulty in commenting upon these criticisms of yours; they are essentially so groundless and absurd, and I know them in my own heart to be so utterly untrue. If an American or English schoolboy were asked to give a retrograde chronological list of the Presidents of the United States, or the Sovereigns of England, from the present time to the commencement of this century, would he not begin with General Grant and Queen Victoria? According to your logic, however, that would imply "self-exaltation" on the part of the pupil; and to avoid this he ought to commence with King William the Fourth, and the Presidents Johnson and Lincoln. But would not such a strange "~~inversion of required~~ historical ~~order~~," if unhappily indulged in, bring down condign punishment and contempt on the disciple? and is there not occasionally truth in the saying that "sages may sometimes do and say as foolish things as schoolboys?" If I had the same history to re-write to-day, I do not know that I would or could write it in any different terms, except by pointing out more distinctly Dr. Wells's claims, and also Dr. Jackson's. And pray in what terms would or could you advise me that it should have been written, or should be written now? Ought I to have broken out into some high-flown sentence or sentences regarding the anæsthetic effects of sulphuric ether, when I spoke *secondly* of that anæsthetic? Would it not, let me ask you, have been more natural—for me at least—to have done so in speaking of chloroform, instead of dismissing it in the two brief lines I have already quoted, seeing, especially, that I knew that it was employed in hundreds or even thousands of instances for every five or ten in which sulphuric ether was used?

I have, I find, printed another short epitome of the history of anæsthetics, but I am not sure that it will please you better. In a paper on *Etherisation in Surgery*, published in September 1847—the first of a series on the subject—I take occasion to speak of Dr. Morton of Boston as "the gentleman to whom I believe the profession and mankind are really and truly indebted for first reducing into practice the production of insensibility by ether-inhalation, with the object of annihilating pain in surgical operations"—language stronger, I think, than I have seen in most American essays on the subject. And at the meeting of the Edinburgh Medico-Chirurgical Society, on November 10th of the same year, I laid before them a paper termed "Historical Researches regarding the Superinduction of Insensibility to Pain in Surgical Operations, and Announcement of a new Anæsthetic Agent." This communication on the history of anæsthetics, like that in the *Encyclopædia Britannica*, took up the subject in retrograde chronological order. In the abstract of it which appeared in the *Edinburgh Journal* (it was never published entire), I find that I trace out the chemical and therapeutic essences of sulphuric ether, and add as follows:—"Its power of producing, by inhalation, effects like intoxication, or like the influence of nitrous oxide gas, he (Dr. Simpson) showed to have been stated by various American authors, as by Professor Samuel Jackson (1833), Wood and Bache (1834), Miller (1846), before it was so fortunately adopted by Dr. Morton as an anæsthetic agent. His belief was, that Professor Charles Jackson improperly claimed the merit pertaining to its recent happy application to surgery, etc. Perhaps the idea of relieving patients from the pains of surgery by some such means, or rather, the restoration of that idea in recent times (for it was an old one), belonged justly to Horace Wells."—(See *Edinburgh Monthly Journal of Medical Science* for December 1847, p. 453.)* From the abstract of this paper it appears that I went chronologically backwards, through various old anæsthetic vapours and measures, to the use of the fumes of Indian hemp in the time of Herodotus. I then took up the last or second part of the paper, and showed the Society chloroform and its effects.

At the time at which this paper was read, we had, with almost every

* (See *Edinburgh Journal of Medical Science* for 1847, p. 451. It has been republished in the volume of mine on *Anæsthesia* (p. 190), printed at Philadelphia in 1848, but it is not republished in the collection of my writings edited by Drs. Priestley and Storrer.

With the Author's Compliments.

THE JUBILEE

OF

ANÆSTHETIC MIDWIFERY

AN INAUGURAL ADDRESS

TO THE

GLASGOW GYNECOLOGICAL AND OBSTETRICAL SOCIETY,
ON TUESDAY, 19th JANUARY, 1897, BY
THE HON. PRESIDENT

SIR ALEXANDER R. SIMPSON, M.D., D.Sc., LL.D.,
EMERITUS PROFESSOR OF MIDWIFERY IN THE UNIVERSITY OF EDINBURGH

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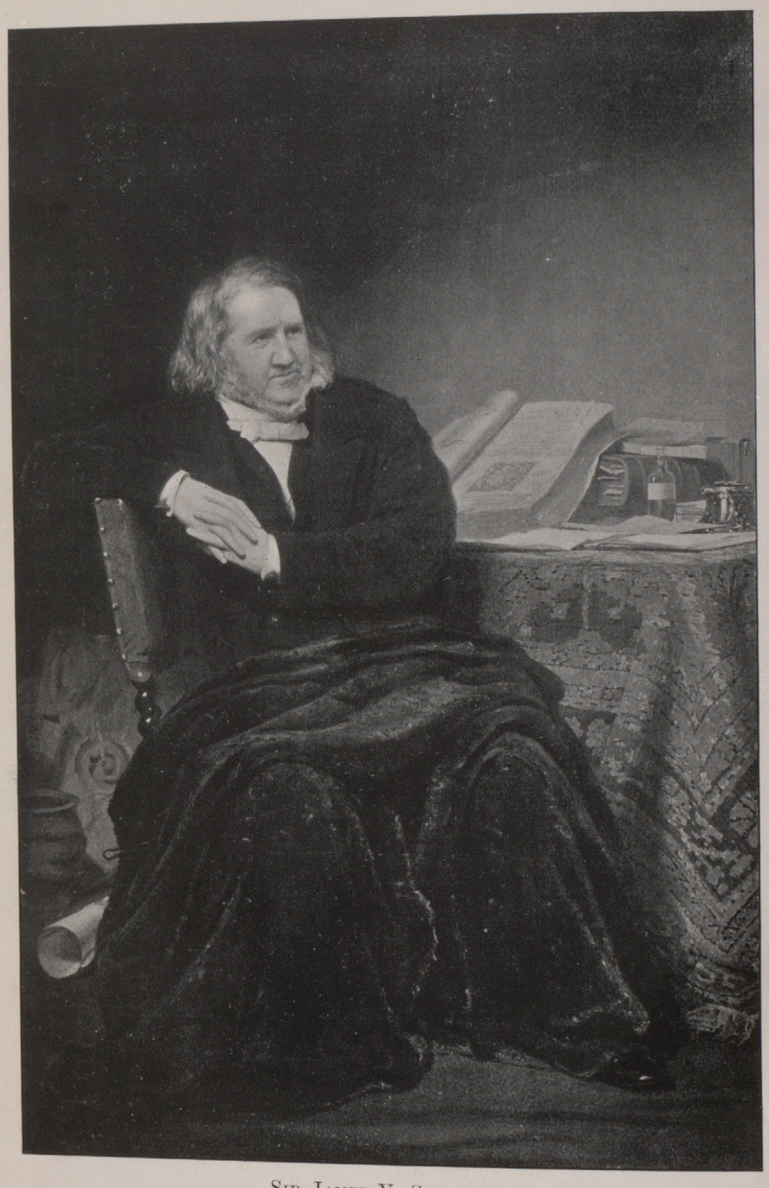


SIR JAMES Y. SIMPSON.

(From a portrait by Norman Macbeth, R.S.A., in the possession of Sir Alexander Simpson.

THE JUBILEE OF ANÆSTHETIC MIDWIFERY.

By Sir A. R. SIMPSON, M.D., D.Sc., LL.D.,
Emeritus Professor of Midwifery in the University of Edinburgh.

Mr. President and Gentlemen,—My first duty in meeting you to-night is to offer you my hearty thanks for the distinction you have conferred on me in electing me as your honorary president. It is a high honour to preside over a Society which, though young in years, has already made valuable contributions to the progress of obstetrics and gynecology, and it affords me peculiar gratification to be brought into this pleasant relationship, alike with the younger workers in the field and with the older obstetricians whose friendship I had the happiness to gain during the years when I was a practitioner of medicine in Glasgow from 1865 to 1870.

I am well disposed to believe that these former friendships have conspired with your generous appreciation of what work I may have done, or encouraged younger men to do, in leading you to pay me this welcome compliment. But whenever I am called to occupy the presidential chair of an obstetrical society, it always comes back to me that there's more in a name than Shakespeare's lovelorn Juliet was willing to allow; and I have fancied that some of you thought it fitting that the session that should see the jubilee of anæsthetic midwifery should have a Simpson for its honorary president.

The First Anæsthetic Labour.

I proposed to your secretary to meet you to-day, because it was on a Tuesday, the 19th of January, fifty years ago, that J. Y. Simpson first made a woman in labour breathe the vapour of sulphuric ether and

delivered her in her sleep. The case and its results were stated publicly on the following day—first to his class in the University, and later in the evening to his brethren in the Obstetrical Society. In the February number of the *Edinburgh Monthly Journal for Medical Science* some details were published; and in "Notes on the Inhalation of Sulphuric Ether in the Practice of Midwifery," which appeared in the March number of that *Journal*, it is more fully recorded thus:—

"The first case in which I employed the ether vapour occurred on the 19th of January. The pelvis of the mother was greatly contracted in its conjugate diameter from the projection forwards and downwards of the promontory of the sacrum; the lumbar portion of the spine was distorted, and she walked very lamely. The present was her second confinement. Her first labour had been long and difficult; she began to suffer on a Monday, and, after a protracted trial of the long forceps, was at last delivered by craniotomy late on the subsequent Thursday night. Even after the cranium had been fully broken down, a considerable time and much traction had been required to drag the diminished and mutilated head of the infant through the contracted brim of the pelvis, and she was long in recovering. Contrary to the urgent advice of her medical attendant, Mr. Figg, he was not made aware of her present or second pregnancy till she had arrived at nearly the end of the ninth month. It was thus too late to have recourse to the induction of premature labour, which had been strongly pressed upon her as the only means of saving her child, should she again fall in the family way. The pains of her second labour commenced in the forenoon of the 19th. I saw her with Mr. Figg at 5 o'clock in the afternoon, and again at 7 o'clock. The os uteri was pretty well dilated, the liquor amnii not evacuated, the presenting head very high, mobile, and difficult to touch; and a pulsating loop of the umbilical cord was felt floating below it in the unruptured bag of membranes.

"From 5 to 9 o'clock the pains seemed only to push the circle of the os uteri further downwards, without increasing its dilatation or making the head in any degree enter into the pelvic brim. Assisted by Dr. Ziegler, Dr. Keith, and Mr. Figg, I shortly after 9 o'clock made the patient inhale the ether vapour. As she afterwards informed us, she almost immediately came under the anodyne influence of the ether. But in consequence of doubts upon this point, its use was continued for nearly twenty minutes before I proceeded to turn the infant (as I had previously predetermined to do). A knee was easily seized, and the child's extremities and trunk readily drawn down; but extreme exertion was required in order to extract the head. At length it passed the contracted brim with the anterior part of its right parietal bone deeply indented by pressure against the projecting promontory of the sacrum, and the whole cranium flattened and compressed laterally. The infant gasped several times, but full respiration

could not be established. The transverse or biparietal measurement of its head, at the site of the indentation, was, in its compressed state, not more than 2½ inches. Hence we judged the conjugate diameter of the pelvic brim not to exceed this. The infant was large, and rather above the usual size. It weighed 8 lbs. On afterwards examining the head and removing the scalp, no fracture could be found at the seat of the indentation. The thin parietal bone had merely bent inwards.[1]

"On questioning the patient after her delivery, she declared that she was quite unconscious of pain during the whole period of the turning and extracting of the infant, or, indeed, from the first minute or two after she first commenced to breathe the ether. The inhalation was discontinued towards the latter part of the operation, and her first recollections on awaking were 'hearing,' but not 'feeling,' the head of the infant 'jerk' from her (to use her own expressions), and subsequently she became more roused by the noise caused by the preparation of a bath for the child. She quickly regained full consciousness, and talked with gratitude and wonderment of her delivery, and her insensibility to the pains of it. Next day I found her very well in all respects. I looked in upon her on the 24th (the fifth day after delivery), and was astonished to find her up and dressed, and she informed me that on the previous day she had walked out of her room to visit her mother. Mr. Figg informs me that her further convalescence has been uninterruptedly good and rapid."

Inauguration of the Anæsthetic Era.

"Abundant evidence," Simpson had said in publishing his *Notes*, "has of late been adduced, and is daily accumulating in proof of the inhalation of sulphuric ether being capable, in the generality of individuals, of producing a more or less perfect degree of insensibility to the pains of the most severe surgical operations." The first public evidence of the anæsthetic property of ether had been given three months previously in the Massachusetts General Hospital, of Boston, U.S.A., by William Thomas Green Morton; and our Transatlantic brethren did well to choose the 16th of October last to celebrate the Jubilee of the Inauguration of the Anæsthetic Era in Medicine. For it was on the 16th of October, 1846, that Dr. Morton put to sleep a man on whom Dr. J. J. Warren, the senior surgeon of the hospital, operated for a vascular tumour under the jaw with complete success. Mr. Morton was a dentist, on whom some years later the Washington University of Medicine in Baltimore worthily conferred the honorary degree of M.D. Mr. Horace Wells, of Hartford, Connecticut, who had

[1] The skull and casts of the infant's head are preserved in the Obstetrical Museum in the University of Edinburgh, and were exhibited at the meeting.

had Morton first as a pupil and afterwards as a partner in his profession, had demonstrated two years earlier that insensibility to pain could be produced by the exhibition of nitrous oxide gas, sufficient to admit of painless tooth-pulling; but he failed to satisfy the Boston surgeons of the possibility of its systematic employment either in dentistry or general surgery. Dr. Charles Thomas Jackson, professor of chemistry in Harvard University, had made known to Dr. Morton the virtue of sulphuric ether, when the latter was zealously trying to follow up the experiments of Horace Wells. Unseemly disputes arose among them and others who claimed to have forestalled them. But as the mists of controversy cleared away, it became evident that to Morton belonged the chief merit of the discovery, although he had dimmed his fair fame by taking out a patent and trying to make a trade of it.

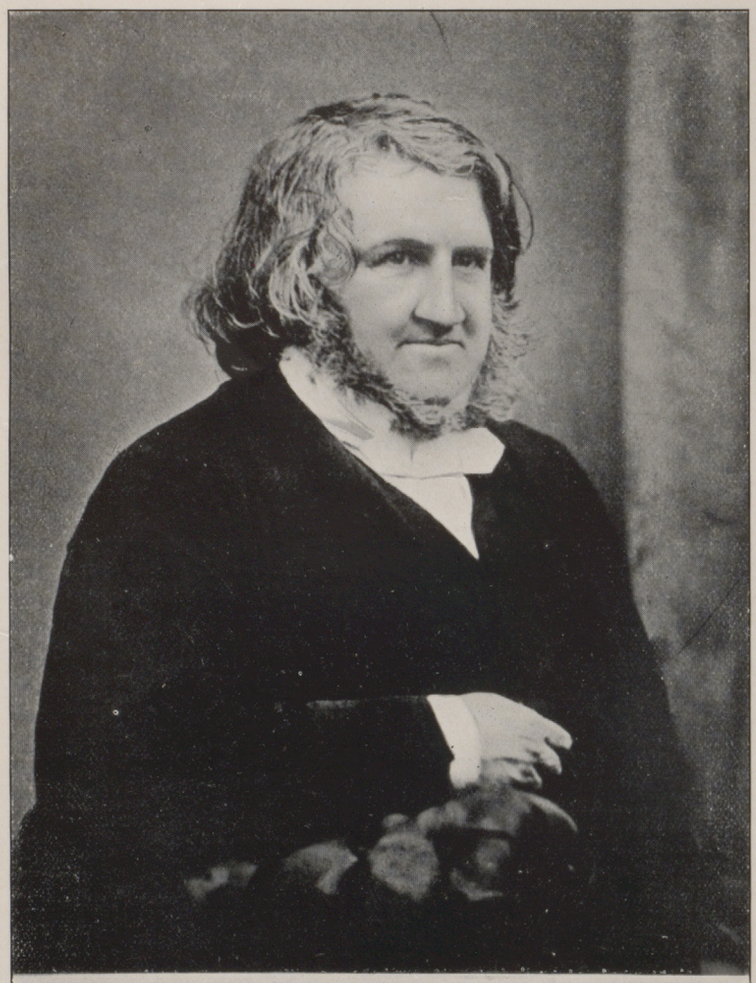
It was needful that someone else should arise to convince alike the profession and the public of the value of anæsthetics, and to secure their use in all the exigencies of practice; and Sir William Fergusson was well within the mark when he said, "It was at least fortunate for anæsthesia that Simpson took it up." Ere humanity could reap the benefit of the discovery, a hard battle had to be fought against ignorance, apathy, and prejudice, and James Young Simpson was the protagonist in the scene.

The Hero in the Strife.

The story of his life may be read in full in the excellent *Memoir* written in 1873 by his learned friend, Professor Duns, or in the more recent vivid sketch in the series of *Famous Scots*, from the pen of his talented daughter. The earliest notice of Simpson occurs curiously enough in the first of two volumes, which contain a record of all the cases of midwifery that occurred in the practice of Mr. Dawson, surgeon in the village of Bathgate in West Lothian, where Simpson was born in 1811. It reads—"275. June 7. Simpson, David, baker, Bathgate. Wife, Mary Jarvey, æt. 40. Lab. nat., easy, rapid. 8th child. Son. Natus 8 o'clock P.M. Uti veniebam natus. Paid 10/6."

His Forebears.

David Simpson came of a race which in earlier generations furnished moss-troopers for border raids, and in more recent times had earned their bread by the hard toil of farmers, quarrymen, and other like peaceful avocations. David's father was a farmer, shrewd and energetic, and renowned in the countryside for his skill in the management of cattle and their diseases. There was a strong streak of superstition in him that came out in various ways. Thus, when a beggar



J. Y. Simpson

woman who was wont to be wheeled in a barrow from one part of the parish to another had had her rest and refreshment at Slackend, he bade a servant lass wheel the old wife away. To his dismay the woman broke out, "I'll hae nae bit hizzy like that to hurl me. Gaur ane o' your five braw lads gang wi' me, or it'll be the waur for this hoose." He remembered that his daughter had sprained her ankle when the woman had been round that way before, and taking it into his head that she was a witch, he whipt a sharp piece of flint out of his pocket and drew a gash across her brow, saying, "Ah, I see what ye're noo, ye auld witch; but I've scored ye aboon the braith, and my hoose is safe."

If James Simpson inherited from his paternal forebears the tireless energy, the patient industry, the readiness for conflict, the resourcefulness in emergencies that were to be in him so signally displayed, his mother transmitted to him qualities that were not less needful for the great career before him. Along both lines happily he inherited a reverence for grace and truth, a certain fearless independence of judgment, and that "firm resolve" which Burns apostrophises as "Thou stalk o' carl-hemp in man." But it was from his mother especially that he drew his exquisite sensitiveness to pain and tender sympathy for sufferers, his rare intuition-like power of rapid perception, his deftness of touch, his silvery voice, and the magnetic attractiveness that worked like a spell on multitudes. For Mary Jervay was of Huguenot descent on her father's side, and among her maternal ancestors she counted kin with some of the gentlest of Scottish blood. In particular the family took delight in tracing back their pedigree to James Cleland of that ilk, who was cousin to Sir William Wallace, and one of his henchmen in the Scottish wars with "proud Edward's power," which, happier than his kinsman, he lived to see broken when he followed Bruce to Bannockburn. She was 40 years of age when she gave birth to her seventh son and youngest child, and she continued to suckle him till he was 3 years old; so that when people would be speaking of their earliest memories he sometimes astonished a fitting company by saying he remembered when he was weaned.

His Boyhood.

In Scotland a seventh son is ever an object of peculiar interest, and the winsome boy who occupied this place in the baker's house seemed at once to bring good fortune with him. Things began to amend in business after he appeared, and the sister who played for many years a mother's part to him proudly foretold his future greatness. As a child he must have been of cherubic innocence. The brother immediately above him in the family would tell how James came to him one day with great glee to show him a halfpenny that his quick

eye had discovered under a stone in the corner of Gideon Street. "My, I wouldna like to be you," said David, with a very grave face. "Glowd-ma-grannie'll hae put it there." (Glowd-ma-grannie was the nickname of the village character who was the terror of the small boys and the butt of the bigger lads of that generation in Bathgate.) "If *he* finds out wha took his bawbee, you'll catch it." The little innocent went and slipped back the coin under the stone, where, of course, David found it by and by. Probably the disappointment was sweetened by one or two of the sugar-balls in which the halfpenny would be invested. That he could acquit himself well in boyish accomplishments may be gathered from the circumstance that when he was careering on stilts once in the gloaming he sent old John Crawford home in a fright, declaring to his household that he had "seen Jamie Simpson's wraith fleeing yont Jervay Street."

The head that, when it came to full development, was to be described, with its long wavy locks, as "Jove-like," was already noted in the youth to be of extraordinary size. When on a visit to his oldest brother at Grangemouth, the village barber there cropped his hair so close that his brother went to remonstrate with the man, who pled that the "callant had sic a muckle heid, I was daein' my best to mak' it look respectable."

Student and General Practitioner.

As in many a Scottish homestead where love reigns, some of the older members stinted themselves to secure the education of the bright young brother who was the sunshine of their home. He learnt so much in his native town as to be able to profit by two years' attendance at the arts classes in the University of Edinburgh, and acquired a taste for literature, and especially such a knowledge of Latin as made it a delight for him in after years to hunt through all kinds of antique volumes to find out what had been known in former times on the many matters that came to engage his interest. For whether the subjects he treated of were more general, or more strictly professional, even when he was obtaining some new outlook and moving on to fresh lines of discovery, he was always eager to trace out the way along which the human mind had travelled; and many of his essays thus form a storehouse of reference for the history of their themes.

When he had studied medicine for three years he was able to obtain the diploma of the Royal College of Surgeons at the age of 19, and was thus qualified to apply for a situation as surgeon to the village of Inverkip. He has said that if chosen he would probably have worked on there as a village doctor all his days. That is not at all likely, but we can well believe him when he says—"When not selected, I felt perhaps a deeper amount of chagrin and disappointment than I have ever experienced since that date."

He spent a season in working sometimes with his friend, Dr. Girdwood, in Falkirk, and more frequently with the family doctor, Mr. Dawson, in Bathgate. The worthy doctor was glad to have his aid in looking after some of his patients and making up their prescriptions, and occasionally got opportunities for him to make the post-mortem examinations which his spirit of scientific investigation prompted him to seek. In one case the old doctor pointed out to him a fistulous opening which had resulted from a central rupture of the perineum during labour, and on the way home remarked that it would have made a fine preparation. "I thought so," said his young assistant, "and I've got it in my pocket." He had a woodcut made of it years afterwards to illustrate his lectures, and here is the preparation still. In making his visits in the country he took note of the antiquities and natural history of the district, and made a special note of a bed of *Senecio saracenicus* growing at Kirkroads, near the site of an old Cistercian monastery—a plant which is said to have only one other habitat in Scotland.

Perhaps his experiences revealed to him that the department of the healing art in which he was most defective was what to a general practitioner is the all-important department of midwifery. He had a keen scientific bent, greatly fostered by association with his fellow-townsman and room-mate in their college days, Dr. John Reid, who afterwards became Professor of Physiology in St. Andrews; and, as the midwifery lectures were not delivered till between three and four in the afternoon, he told me that, when he attended Professor Hamilton in 1829-30, he regularly went off to sleep. Hence, when he returned to Edinburgh to fit himself for taking the University degree of M.D., he attended three of the courses of lectures given by Dr. Thatcher, one of the extra-mural lecturers who was afterwards a rival in his contest for the chair. With this exception, he had given no special attention to the sphere of medicine with which his name was to be for ever associated, and at the time he attended Thatcher's lectures he was acting as first assistant to Dr. John Gairdner, who said of him that "his abilities and attention promise the most flattering expectations."

His First Situation.

The subject of the thesis which he had to submit for the obtaining of the doctorate, in 1832, was a pathological one—*De causâ mortis in quibusdam inflammationibus proximâ*—written, according to the custom of the time, in Latin. This thesis fell into the hands of Dr. John Thomson, who had been appointed to the chair of Pathology, founded at his own instance just a year previously. Professor Thomson, father of William and Allen Thomson, who filled with such distinction the chairs respectively of Practice of Physic and Anatomy in the University

of Glasgow, was so struck with the ability of the young graduate that he offered him the position of assistant at a salary of £50 a year. It was his first offer of a definite position and was gladly embraced. He had not only to assist the professor in the arranging of his museum and writing descriptions of his preparations and drawings, but also in the composition of his lectures. On one occasion he had written, at the request of his "chief," part of a lecture dealing with microscopic observations which were then quite novel. His young enthusiasm led him to write strongly of the importance of these researches, and of the light which the use of the microscope was likely to throw on various pathological problems. It was only ready in time for the professor to take into the class-room without previous perusal. Several times as he read the lecture to the class he looked up from his paper to glower at his assistant; and when they got to the side-room he shook his fist in his face, saying, "I don't believe one —— word of it." But though Thomson was sceptical as to the value of the instrument that was to revolutionise his science, he had the shrewdness to recognise the rare gifts of his young assistant, and when he was unable to conduct his course in the session 1837-38, he got Simpson appointed as interim lecturer.

Becomes Obstetrician.

He it was who first pointed out that in the sphere of midwifery Simpson would find the most fitting field for the exercise of his faculties; and, through the kindness of Dr. Moir, I can show you the note with which he furnished the student graduate when he advised him to get the profit of another course of the lectures of his colleague, Professor Hamilton. It reads:—

"My Dear Sir,—I beg leave to introduce to you the bearer of this note, Dr. James Simpson, an old pupil of your own, who has acted as my amanuensis for a long time. He is desirous to attend your lectures this winter, and I shall feel particularly obliged to you if you will have the goodness to give him a ticket for that purpose, and shall be happy in an opportunity at any time of obliging you in a similar manner.—Yours faithfully,

"John Thomson.

"80 George Street,
19*th November* 1833."

It was thus not till he had been for more than a year a graduate that he set himself earnestly to master midwifery, and busy though he necessarily was with pathology, by the time he had to read a dissertation to the Royal Medical Society in November 1835, he produced a work on *Diseases of the Placenta*, which is still a classic. In 1838 he began an independent course of lectures on his chosen theme, and felt so confident of success that as the professors entered on one occasion

for the "capping," which he had taken some lady friends to see in the University, he pointed to Professor Hamilton and said, "Do you see that old gentleman?—well, that's my gown." On the 4th of February 1840 the sagacious Town Council gave him the right to wear it, and commissioned him to teach midwifery and the diseases of women and children. When my father told Dr. Dawson of the happy event, the old man only said, "It's all very well to have got his chair. But you know he can never have such a practice as Professor Hamilton. Why, ladies have even been known to come from England to consult him." Happily he lived long enough to see ladies begin to come from the ends of the earth to consult Hamilton's successor.

Professor of Midwifery.

When Simpson took up the duties of that chair, it soon became manifest that a master mind had begun to deal with midwifery and the diseases of women. If it has been truly said that "he gave a new life to Obstetric art and science," it may be said that as for Gynecology he presided at its birth. It was born *eo obstetrice*. His genius showed itself (1) in his power of seeing things; (2) in his power of adapting means to ends; and (3) in his power of making others see what he had seen, and do what he had done. Let me illustrate this, first from the obstetric, and then from the gynecological department of his work.

Here is the cast of the head of a child which he helped Dr. Burns to deliver by means of Murphy's craniotomy forceps. After breaking up the skull he left the patient, according to the then common practice, to allow the uterus to recover its tone, and to give time for the commencing swelling of the passages to subside. Returning in a few hours, he found to his surprise that the head had already descended through the narrow brim, and the child was easily extracted. Surely such an occurrence was not novel. But Simpson saw it. He saw that unintentionally he had fractured the occiput close to the foramen magnum. He reasoned that if we could in every case fracture the base of the skull, the extraction of the head would be facilitated, and he set himself to contrive the cranioclast. As soon as he had proved its efficacy he published an account of it, and, as modified by Braun of Vienna, it speedily superseded all previous methods of reduction of the head.

In this jar you see a preparation of a uterus containing a fibrous polypus, the neck of which is in process of separation, resulting in a fatal hæmorrhage. Aided by the sound, which he had not long previously invented, he and his friend Dr. Alexander Wood, who had called him in to see the patient, formed a shrewd guess as to the cause of the patient's floodings; but they were not allowed to use any means to get at the seat of mischief. It would, I presume, be now impossible to

obtain such a preparation, for Simpson saw how that life might have been rescued if only they had had the power of opening up the cervix, and he contrived the now familiar sponge-tent for the purpose. Of course, other methods of dilating the canal have also been employed since then, but until Simpson saw that uterus, and showed how simply such patients could be cured, the writers on female diseases spoke of the *diagnosis* even of intra-uterine polypus as always doubtful, and in most instances impossible. Nothing more easy now both to recognise and to remove. He never kept anything secret that he thought could help his fellows, and it is hard to say whether his delight was greater in finding some new means to cure disease, or in demonstrating to others his methods of treatment.

The note-books of his student days are studded with points of interrogation attached to the dicta of his teachers. After he began to have Nature for his teacher, he questioned her at every turn, and ever and anon she yielded up to him some secret.

His Versatility.

Surely there never was another to whom so many practitioners came to get new lessons in the healing art. For more than a quarter of a century, hardly a day, and never a week passed without bringing doctors to the house, to whom he had something fresh to show. The country doctor who came with a patient was shown others with kindred ailments, saw how they were being treated, and went back to his solitary sphere with new confidence and success. The foreign professor, who had been doubtful as to some procedures, came and stayed for a week or two, till he was satisfied of their feasibility, and returned to put them in practice, and teach them to his students. Younger men would come from all quarters, both of the old world and the new, to spend sometimes weeks, and sometimes months together, studying his principles and observing his practice, and then go to propagate them everywhere.

I do not attempt to speak of the work he did outside his profession, in archæology ; in literature ; in politics, local and imperial ; in university and medical reforms ; and in many varieties of philanthropic enterprise. The great brain was never at rest, and found its recreation only in change of interest. Within the range of his profession his interests were not confined to the special department of his chair. Foreigners working in the sphere of surgery sometimes spoke of him as a surgeon. His old master, Professor Thomson, had told the Town Council of his day that he was "fully qualified to conduct the business of the Pathology class ;" and when Alison died in 1854 there were many who wished he would take the chair of Practice of Physic. Ere the day of anæsthesia dawned he had begun to vivify Midwifery and to bring Gynecology into

being as a science. Had he never lulled for woman her travail pangs, his name would still have been written among the immortals in his art. "Gifted," said his colleague, Professor Miller, in 1848, "with talents that are given to few; armed with a zeal and enthusiasm which are absolutely indefatigable; restless and eager, yet withal careful and scrupulous in his research for truth; full of a pure and large-hearted benevolence—he has made many discoveries and improvements in his profession, which are of themselves well capable of transmitting his name safe and honoured to posterity. But all are eclipsed in this his latest and his best. We admire his talents; we praise his zeal; we rejoice in his success; and while we honour his genius, we love the man."

One of Her Majesty's Physicians.

Before the news came from America that surgical operations might be carried out painlessly on patients narcotised with ether, his high position in the profession had been acknowledged in the highest quarters. Just at that time one of Her Majesty's physicians for Scotland died, and the Duchess of Sutherland, Mistress of the Robes, requested of the Queen to appoint Dr. Simpson to the vacant office. While he was conducting his first anæsthetic labour, this letter from Her Grace was on its way to Edinburgh:—

"Stafford House,
January 18th.

"Dear Sir,—It was a great pleasure to me to receive yesterday a letter from the Queen, telling me that she should have much pleasure in complying with the request 'which his high character and abilities make him very fit for.' The Queen adds that it will be officially communicated to you.—I remain, Dear Sir, yours very truly,

"Harriet Sutherland."

The contents of Her Grace's note he communicated to his brother on the Friday following, the 22nd, in a letter which was never meant to be read beyond the family circle, but from which I quote two characteristic sentences:—"Flattery *from the Queen* is perhaps *not* common flattery, but I am far less interested in it than in having delivered a woman this week *without* any pain while inhaling sulphuric ether. I can think of naught else."

Prepared to Welcome Discovery of Anæsthesia.

This utterance reveals to us a quality which made him welcome with a peculiar eagerness the new discovery, and expend all his energies for its development—that is his delight in the lessening of pain. The great strong brain was matched with a great tender heart. In his student days he was so distressed with the screams and groans of a

poor Highland woman on whom Liston was performing excision of the mamma, that he quitted the Infirmary in sadness, and betook himself to the Parliament House. He thought of seeking work in some writer's office. On further reflection he returned to the scenes of suffering, with the problem pressing on his heart and mind how the pains might be relieved. In lecturing to students or addressing graduates he never wearied in insisting that "the proud mission of the physician is distinctly twofold—viz. to alleviate human suffering as well as to preserve human life." Ten years before the anæsthetic virtue of ether vapour was made known, whilst he was first establishing himself in practice, he made experiments with hypnotism, which Abercrombie, Alison, and other leaders of the profession came to his hospital to see. So when the news reached Edinburgh in 1846 that Liston had performed some operations on patients narcotised with ether, Simpson immediately began to inquire whether in the inhalation of sulphuric ether there might not at length be found the means he had been dreaming of for years of soothing the most agonising pains to which humanity is subject, the pains he had so often to watch with pitying helplessness—the pains of woman in travail.

First Midwifery Case Selected for Scientific Experiment.

The idea of surgical anæsthesia was not new. It was easy to believe that a means had at last been found of producing it. But to put to sleep a woman in labour is another and a new idea. In realising it, problems have to be faced that do not meet the surgeon. Bigelow, of Boston, and Liston, of London, for example, had the fancy that the benefits of anæsthesia in surgery would be principally seen in the practice of swift operators who had remarkable powers of execution, and in whose hands the patient would be for the briefest possible space under the influence of the anæsthetic. If it was to be used in midwifery at all it would require prolonged administration. That and other problems had to be met, and ere Simpson entered on the field it is very worthy of note that, eager as he was to prove the virtue of the new anodyne, he was careful to select a case that was fitted to afford a solution of the most important of the problems. The case, as we have seen, was one of deformed pelvis, in regard to which he says, "I had predetermined to extract the child by turning, and to try the inhalation of ether vapour upon the mother, with a view to facilitate that operation. During a week or two previously, I had anxiously waited for the supervention of labour in this patient; for, by the result I expected that much would be decided in regard to ether-inhalation in parturition. Would it merely avert and abrogate the sufferings of the mother without interfering with the uterine contractions? or, would it arrest simultaneously both the contractions of the uterus and the

sufferings that arise from them? As far as the proposed mode of delivery by turning was concerned, it was a matter of no vital importance whether the etherisation stopped the uterine contractions or not. And on this circumstance depended the eligibility of the case for a first trial of ether-inhalation. The result was most satisfactory and most important; for it at once afforded me evidence of the one great fact upon which the whole practice of anæsthesia in midwifery is founded—it proved, namely, that though the *physical sufferings* of the parturient patient could be annulled by the employment of ether-inhalation, yet the *muscular contractions* of the uterus were not necessarily interfered with; or, in other words, that the labour might go on in its course although the sensations of pain usually attendant upon it were for the time being altogether abrogated."

Conclusions from Series of Observations.

Having satisfied himself from his careful observation of this case that ether could avert the pains without arresting the contractions of the uterus, he proceeded to make application of it in other patients, and at the next meeting of the Obstetrical Society, on 10th February, he was able to give the history of etherisation in some cases of natural labour, and in one forceps case. The inferences that appeared deducible from these observations he stated in the following terms:—

"1. That the inhalation of ether procured for the patient a more or less perfect immunity from the conscious pain and suffering attendant upon labour;

"2. That it did not, however, diminish the strength or regularity of the contractions of the uterus;

"3. That, on the other hand, it apparently (more especially when combined with ergot) sometimes increased them in severity and number;

"4. That the contraction of the uterus after delivery seemed perfect and healthy when it was administered;

"5. That the reflex assistant contractions of the abdominal muscles, &c., were apparently most easily called into action by artificial irritation and pressure on the vagina, &c., when the patient was in an etherised state;

"6. That its employment might not only save the mother from the mere pain in the last stage of labour, but might probably save her also, in some degree, from the occurrence and consequences of the nervous shock attendant upon delivery, and thereby reduce the danger and fatality of childbed; and

"7. Its exhibition did not seem to be injurious to the child."

In the early experiments the patients were not kept anæsthetised for more than half an hour, but in the course of the three or four

following weeks, he ascertained that anæsthesia could be safely kept up during labour for one, two, three, and even six hours.

Spread of the Practice.

Having at once, as we have seen, communicated the success of his first experiment to his professional brethren, his example was followed, first in France by Fournier Deschamps, on 27th January, and then by Baron Dubois, who, on 23rd February, reported to the French Academy of Medicine the results of his experience, with the five following conclusions:—

"1. The inhalation of ether can annul the pain of obstetrical operations.

"2. It can suspend the physiological pains of labour.

"3. It destroys neither the uterine contractions nor the contractions of the abdominal muscles.

"4. It diminishes the natural resistance of the perineum.

"5. It does not appear to act unfavourably on the health or life of the infant."

In London, Dr. Murphy first, on 13th February, and Dr. Prothero Smith in March, took up the practice. In Germany the first case of anæsthetic midwifery occurred on the 24th of February, under the care of Professor Martin, of Jena. "In America," says Simpson in his report on the early history and progress of anæsthetic midwifery, "the country to which we are indebted for the first knowledge of the anæsthetic effects of sulphuric ether in surgical operations, the same agent was not employed in midwifery till the reports of its use in obstetric practice in Europe had recrossed the Atlantic." It was on the 7th of April that it was first employed in a case of labour by Dr. Keep, of Boston.

Interest of the Community in Anæsthesia.

In surgical practice the superinduction of anæsthesia was already meeting with opposition, which became only the more pronounced when it began to be employed in the practice of midwifery. In Edinburgh, in the early days of anæsthesia, many of the citizens found their way to the operating theatre in the Royal Infirmary, "among them," says Professor Miller, "the great, the good, the singularly humane Chalmers, and it was one of the early triumphs of anæsthesia here to see that man of large and tender heart witnessing a bloody and severe operation with composure and serenity, feeling little because the patient felt not at all."

Opposition to Anæsthesia.

But all are not gifted with the open mind and the large heart of a Chalmers. Objections began to be heard on every hand that the novel

practice was unnecessary, was dangerous, was impious, and that no good could come of it; and the loudest and most persistent objectors were found strangely enough among members of the profession, which, through all the ages, had been trying to lessen the sufferings of mankind. On the man who first dared to apply it for the relief of the pains of labour, fell the task of enlightening ignorance, of disarming prejudice, of dispelling superstition, and of vindicating for surgeons and accoucheurs the right to give, and for sufferers to claim, the ease that anæsthesia was calculated to afford.

Religious Objections.

To some minds it seemed that the proposal to still the sufferings of a parturient woman was to run counter to a divine command. "It has been ordered," wrote a medical opponent of the practice, "that in sorrow shall she bring forth." Simpson wrote a pamphlet in "Answer to the Religious Objections advanced against the Employment of Anæsthetic Agents in Midwifery and Surgery." It is an excellent example of his polemic power, proving from Scripture that the primeval curse as it bore on woman and on the ground was not immutable. He quoted "the sound and excellent Matthew Henry, in his own quaint, pithy, and zealous style," showing "how admirably the satisfaction our Lord Jesus Christ made by His death and sufferings answered the sentence now passed upon our first patient. . . . 'Thus is the plaister as wide as the wound.'" He indicated from the study of the Hebrew roots that to lessen the attendant pain was not to lessen the labour effort that the words seemed to demand. And then he pointed out how the objections raised against the practice of anæsthesia were applicable to improvements in agricultural processes, and had been applied to many discoveries in science and art—even the healing art, as in the case of vaccination. A clergyman spoke of chloroform as "a decoy of Satan," and his friend, George Gilfillan, furnished him with evidence that when fanners first came into use, a clergyman debarred from the communion those members of his flock who used what was termed "the Devil's wind." He was amused to find soon afterwards one of his students, a son of De Quincey, in his graduation thesis rebuking the unmarried ladies who stood up for what they thought was the divine law, and who insisted on their parturient sisters suffering according to the letter, in this fashion:—"The unhappy and wicked woman who remains unmarried appears to break the command herself in four several ways, according to the following tabular statement:—

"1. She has no conception.
"2. She brings forth no children.
"3. Her desire is not to her husband.
"4. The husband does not rule over her."

It pleased him to find De Quincey himself, in a letter appended to

the thesis of his son, arguing that "if pain, when carried to the stage which we call agony or intense struggle among vital functions, brings with it some danger to life, then it will follow that knowingly to reject a means of mitigating or wholly cancelling the danger, now that such means has been discovered and tested, travels on the road towards suicide. It is even worse than an ordinary movement in that direction; because it makes God an accomplice, through the Scriptures, in this suicidal movement, nay, the primal instigator to it, by means of a supposed curse interdicting the use of any means whatever (though revealed by Himself) for annulling that curse."

Moral Objections.

Besides the religious objections, there were what he was wont to speak of in his lectures as the moral objections. These in their various expressions were all based on the idea that the practice was unnatural. This idea, pervading the general community, and likely to prevent sufferers from obtaining the benefit of the new discovery, was vigorously championed by the various medical authorities who took it upon them to write down anæsthesia. Professor Meigs thought it "unnecessary, as shown by the birth of past myriads." Dr. Merriman spoke of "the great superiority of allowing Nature to conduct the whole process of the birth." Dr. Ashwell decried it as an "unnecessary interference with the providentially arranged process of labour." Dr. Montgomery, the then chief of the great Dublin School of Midwifery, wrote during the session a letter to Edinburgh, in which he said, "I do not believe that anyone in Dublin has as yet used ether in midwifery; the feeling is very strong against its use in ordinary cases, and merely to avert the ordinary amount of pain which the Almighty has seen fit—and most wisely we cannot doubt—to allot to natural labour, and in this feeling I heartily and entirely concur." I have before me the sheet from his lecture-notes, on which Dr. Montgomery's letter had been copied by Dr. Matthews Duncan, who was then junior assistant to Professor Simpson. Above the words "ether," "midwifery," &c., the professor has marked alternative readings. He would take one of these, suggestive of a doctor making his daily round among his patients, and ask you to imagine Dr. Montgomery writing, "I do not believe that anyone in Dublin has as yet used a carriage in locomotion; the feeling is very strong against its use in ordinary progression, and merely to avert the ordinary amount of fatigue which the Almighty has seen fit—and most wisely we cannot doubt—to allot to natural walking, and in this feeling I heartily and entirely concur."

Medical Objections.

Then there were various objections of a more distinctly medical kind. It was alleged that the use of anæsthetics would increase

the mortality of surgical operations. Simpson wrote papers full of laboriously collected statistics, which proved that while before the introduction of anæsthesia, in every 100 cases of amputation of the thigh performed in our hospitals, from 40 to 50 of the patients died, the same amputation when performed upon anæsthetised patients did not prove fatal to more than 25 in the 100 cases; or, in other words, that out of every 100 such operations the previous induction of anæsthesia was the means of preserving 15 or 20 human lives.

When obstetricians alleged that no good was gained by the relief of suffering, and when Meigs, for example, went so far as to speak of pain as "a desirable, salutary, and conservative manifestation of life-force," Simpson turned to the reports of the Dublin Lying-in Hospital, and showed that out of all the women—7050 in number—who were delivered within two hours from the commencement of labour only 22 died, *or* 1 *in every* 320; whereas in 452 cases where the labour was prolonged above *twenty* hours, 42 of the mothers died, *or* 1 *in every* 11; "a difference," as he said, "enormous in amount and strongly calculated to force us all to think seriously and dispassionately of the effects of severe suffering upon the maternal constitution."

When it was alleged further that the use of anæsthetics might produce mental derangement, convulsions, paralysis, pericarditis, puerperal fever, and other mischiefs, he showed from the results of a constantly widening practice, the futility of such fears; and in regard to some of these complications of labour, and notably in regard to convulsions, experience eventually showed that so far from causing convulsions, the practitioner had been furnished in the administration of chloroform with his most reliable remedy.

The mention of chloroform reminds me that I have been anticipating.

Is Sulphuric Ether the Only Anæsthetic?

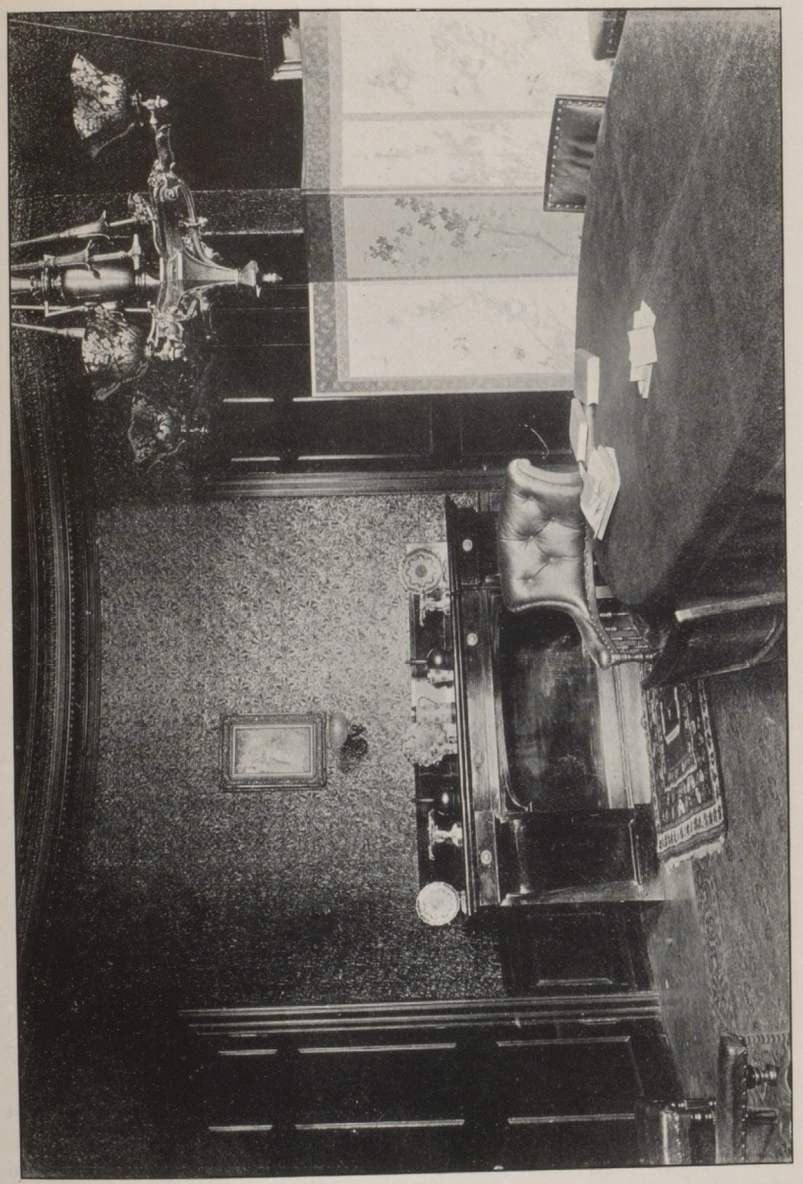
The mind that had riddled the student note-books with points of interrogation was bound to inquire whether Nature had not concealed among her treasures some other agent that might be possessed of the anæsthetic properties of sulphuric ether, without some of its attendant drawbacks. Ether, he noted, required to be administered in large quantities, especially in protracted cases of labour. It occasionally gave rise to bronchial irritations. Its odour was disagreeable and persistent, and hung for long about an accoucheur who had delivered a woman under its influence. He began to inquire whether other anodyne drugs could not be administered through the lungs, and got the chemists, Duncan, Flockhart & Co., to prepare ethereal tinctures and other vaporisable compounds of various potent sedatives for purposes of experiment. The researches he had made into the history of painless surgery quickened the expectation that other

gases or volatile liquids might yet prove serviceable. He talked the matter over with various professional friends more conversant with chemistry than himself, with teachers of chemistry, with practical chemists and druggists. He was led to make experiment on the inhalation of various liquids that seemed more fragrant and agreeable than ether, such as acetone, nitrate of oxide of ethyle, benzin, the vapour of iodoform, &c. Professor Gregory suggested chloride of hydrocarbon (Dutch liquid), which he tried on himself with dangerous consequences. Mr. Waldie, a Linlithgowshire friend who was in business as a chemist in Liverpool, suggested the terchloride of formyle. A small quantity of it was procured from Duncan, Flockhart & Co., but it seemed a heavy unvolatile-like liquid, and for the time was set aside. He had Dr. George Keith and Dr. Matthews Duncan as his assistants at the time, and he gladly expressed his indebtedness to them "for the great and hearty zeal with which they constantly aided him in conducting the inquiry." They used to put a teaspoonful of the liquid which they were testing in the bottom of a tumbler, cup, or saucer, or finger-glass. If it was not sufficiently volatile the vessel was placed in hot water. The mouth and nostrils were held over the mouth of the vessel and inhalation slowly proceeded with, and notes taken of the effects.

Discovery of Anæsthetic Value of Chloroform.

Professor Miller, who lived next door in Queen Street, and looked in nearly every morning at "52" before starting on his rounds at 9 o'clock, has described the circumstances of the eventful evening when chloroform yielded up the secret of its subtle power in a graphic page, which furnishes a trustworthy record of the discovery. It reads:—

"Most of these experiments were performed after the long day's toil was over—at late night or early morn; and when the greater part of mankind were soundly anæsthetised in the arms of common sleep. Late one evening—it was the 4th of November 1847—on returning home after a weary day's labour, Dr. Simpson, with his two friends and assistants, Drs. Keith and J. M. Duncan, sat down to their somewhat hazardous work in Dr. Simpson's dining-room. Having inhaled several substances, but without much effect, it occurred to Dr. Simpson to try a ponderous material, which he had formerly set aside on a lumber-table, and which, on account of its great weight, he had hitherto regarded as of no likelihood whatever. That happened to be a small bottle of chloroform. It was searched for, and recovered from beneath a heap of waste paper. And, with each tumbler newly charged, the inhalers resumed their vocation. Immediately an unwonted hilarity seized the party, they became bright-eyed, very



Dining Room, No. 52 Queen Street.
(In which Simpson, George Keith, and Matthews Duncan experimented with chloroform.)

happy, and very loquacious—expatiating on the delicious aroma of the new fluid. The conversation was of unusual intelligence, and quite charmed the listeners—some ladies of the family and a naval officer, brother-in-law of Dr. Simpson. But suddenly there was a talk of sounds being heard like those of a cotton-mill, louder and louder; a moment more, then all was quiet, and then—a crash. On awakening, Dr. Simpson's first perception was mental—'This is far stronger and better than ether,' said he to himself. His second was, to note that he was prostrate on the floor, and that among the friends about him there was both confusion and alarm. Hearing a noise, he turned round and saw Dr. Duncan beneath a chair—his jaw dropped, his eyes staring, his head bent half under him; quite unconscious, and snoring in a most determined and alarming manner. More noise still, and much motion. And then his eyes overtook Dr. Keith's feet and legs, making valorous efforts to overturn the supper-table, or more probably to annihilate everything that was on it; I say, more probably, for frequent repetitions of inhalation have confirmed, in the case of my esteemed friend, a character for maniacal and unrestrainable destructiveness, always under chloroform, in the transition stage. By and by, Dr. Simpson having regained his seat, Dr. Duncan having finished his uncomfortable and unrefreshing slumber, and Dr. Keith having come to an arrangement with the table and its contents, the *sederunt* was resumed. Each expressed himself delighted with this new agent; and its inhalation was repeated many times that night—one of the ladies gallantly taking her place and turn at the table—until the supply of chloroform was fairly exhausted."

Miss Agnes Petrie, the niece who shared in the experiment, amused them by folding her arms across her bosom before she fell quite asleep, and exclaiming "I'm an angel! oh, I'm an angel!" They sat up till 3 A.M., after the vial was empty, searching works on chemistry for its composition and best methods of preparation. Next day, Mr. Hunter, of Duncan, Flockhart & Co., began that distillation from a retort, which has grown in the hands of the firm to be one of the great industries of Edinburgh. When a few days later Professor Miller offered Simpson an opportunity of administering chloroform to an infirmary patient on whom he was to operate for strangulated hernia. Simpson was unable to attend, and it happened, as has sometimes been seen in other surgical cases, that when the skin had been cut through, the patient fainted and died before the operation had been well begun. On the 10th of November Simpson formally communicated his discovery to the Medico-Chirurgical Society at its first meeting for that session, and when his communication was published, in pamphlet form, with a postscript on 15th November, he was able to announce that he had exhibited the chloroform to about fifty individuals "without the slightest bad result of any kind."

The First Chloroform Labour.

As was to be expected, one of the first to experience the relief from suffering afforded by the new anæsthetic was a parturient patient; and he gave at that meeting of the Medico-Chirurgical Society the following history of the case:—

"The lady to whom it was first exhibited during parturition had been previously delivered in the country by perforation of the head of the infant, after a labour of three days' duration. In this, her second confinement, pains supervened a fortnight before the full time. Three hours and a half after they commenced, and ere the first stage of the labour was completed, I placed her under the influence of the chloroform, by moistening, with half a teaspoonful of the liquid, a pocket handkerchief, rolled up into a funnel shape, and with the broad or open end of the funnel placed over her mouth and nostrils. In consequence of the evaporation of the fluid, it was once more renewed in about ten or twelve minutes. The child was expelled in about twenty-five minutes after the inhalation was begun. The mother subsequently remained longer soporose than commonly happens after ether. The squalling of the child did not, as usual, rouse her; and some minutes elapsed after the placenta was expelled, and after the child was removed by the nurse into another room, before the patient awoke. She then turned round and observed to me that she had 'enjoyed a very comfortable sleep, and indeed required it, as she was so tired,[1] but would now be more able for the work before her.' I evaded entering into conversation with her, believing that the most complete possible quietude forms one of the principal secrets for the successful employment of either ether or chloroform. In a little time she again remarked that she was afraid her 'sleep had stopped the pains.' Shortly afterwards, her infant was brought in by the nurse from the adjoining room, and it was a matter of no small difficulty to convince the astonished mother that the labour was entirely over, and that the child presented to her was really her 'own living baby.'"

Seventeen years afterwards his friend, Dr. Adamson, of St. Andrews, sent Simpson this charming photograph that had just been taken by Rogers of a young lady. The accompanying letter told that it was a photograph of the baby of his first chloroform patient, and as you mark the mild angelic air that rests upon the upturned face above the folded hands, you will understand why Dr. Adamson suggested that it might stand for a picture of Anæsthesia, and that it was a pity the girl had not been called by that name.

Simpson believed that he had discovered in chloroform an anæsthetic

[1] "In consequence of extreme anxiety at the unfortunate result of her previous confinement she had slept little or none for one or two nights preceding the commencement of her present accouchement."

that possessed various important advantages over ether, "particularly in obstetric practice; and that, in particular, it is far more portable, more manageable and powerful, more agreeable to inhale, is less exciting than ether, and gives us far greater control and command over the superinduction of the anæsthetic state." His interest in the new anodyne gave additional zest to the eagerness and energy with which he had set himself to demonstrate the right, and even the duty, of surgeons and accoucheurs to make use of anæsthetic agents; and he did not cease his efforts until he had seen the importance of anæsthesia fairly recognised, and such an impetus given to surgical progress as it had never before received, and such as has only been rivalled since when Lister—praised be the Queen who has raised him to the peerage—inaugurated the Antiseptic Era.

Dangers of Anæsthesia.

Of the anæsthetics that have been proposed for use in practice, three alone at the present hour promise to hold an abiding place—nitrous oxide gas, first used by Horace Wells in 1844; sulphuric ether, introduced by William Thomas Green Morton in 1846; and chloroform, the anæsthetic power of which was proved and promulgated by James Young Simpson in 1847. The fatalities that have attended the administration of each of them have led to a continuous search for some agent that might possess their power without their danger. Simpson to the end hoped that such a discovery might be made. The last time he had a pen in his hand he wrote of anæsthetic agents and said—"In all likelihood some will yet be discovered of types superior to any we yet know." When Dr. Snow, who did so much to perfect and promote the practice of anæsthesia, proposed the use of amylene, his proposal was eagerly welcomed. I remember well the enthusiasm with which Professor Tourdes, of Strasburg, invited me to hear a lecture on the new agent in the spring of 1857. When he had sufficiently discoursed on the drawbacks and dangers of ether and chloroform he proceeded to demonstrate the ease and safety with which a rabbit could be brought under the influence of amylene, and whilst he still praised the new agent, when he lifted the bag off its face—the creature was dead. In 1883 I was present at the Obstetrical Section of the Naturforsscherversammlung in Freiburg, when Professor Bandl proposed the use of bichloride of methylene as a substitute for chloroform in labour. Professor Hegar, the president, winding up the discussion, said—"Yes, gentlemen, we try anything, everything, but in the end we always come back to chloroform."

It is still a subject of discussion whether ether or chloroform is to be preferred as an anæsthetic. Individual minds and groups of minds have inclined to favour now the one, and now the other. In Professor

Ernst Fraenkel's *Tagesfragen der Operativen Gynäkologie*, which came to hand a few weeks ago, we read, "Convinced adherents of chloroform have grown to be enthusiastic advocates of ether, and then gradually and very quietly turned back into the camp of the chloroformists." What we must all recognise and remember is that no anæsthetic has yet been found regarding which we can affirm that it is free from danger; and in each individual case we must choose the agent that seems best adapted to it. In general we see that Wells' nitrous oxide finds its chief sphere of application in the dentist's office; that surgeons who have command of time, assistants, and apparatus may make use of Morton's sulphuric ether; while the surgeon on the battlefield, the general practitioner in his busy round, and the obstetrician in the lying-in room find themselves best served by Simpson's chloroform.

Simpson's Greatest Discovery.

Any sketch of the man, whose services to anæsthesia we have considered, would be incomplete that took no notice of what was to him the most important incident in his life. One who asked of him in his last days, "What do you consider your greatest discovery?" got for reply—"That I am a sinner, and that Jesus Christ is my Saviour." That discovery came to him on Christmas Day, 1861. One of those great spiritual movements that powerfully influence a community was at that time spreading widely through the land, which had this among other characteristics, that it called out in a remarkable manner all classes of laymen, from nobles to navvies, to take part with the ordained ministers in what were then for the first time described as evangelistic meetings.

We have seen that Simpson's house was a rendezvous for all sorts and conditions of men. The strangest streams of life were constantly flowing through it. Candidates for seats in Parliament or in the Council Chamber of the city, for vacant chairs in the University, for posts in the Infirmary, for lectureships in many schools of medicine, and for pulpits in town or country—all came to seek his advice and bespeak his influence. Antiquaries came with their latest finds; artists and architects sought his opinion of their designs; poets brought him their new poems, and novelists their stories; the Arctic voyager, the African explorer, the traveller from Mecca, missionaries from all parts of heathendom, came with news and gifts of every kind. It could not be but that among the throng there should be some who told him that they had found what his friend, Dr. Hanna, called "the open secret." Salome's son, John, may have been ambitious and of a fiery temper, but he was not a bad man before the day when he heard the Baptist say, "Behold the Lamb of God," and he went and followed Jesus. Mary Jervay's son was not a bad man before that Christmas Day when in prayer with

Mrs. Barbour he saw that the babe of Bethlehem had been born to give him second birth. But it was a new man who from that time began to fence his house with family worship; and when I look into the Bible which he bought to read the Scripture from, I find that where the prophet speaks of One "wounded for our transgressions," he has pencilled above the "our" the possessive singular "my." It was consonant with the great-hearted expansiveness of the man, that he began both in private and in public to share his joy with all who cared to taste of it. His conduct has been variously judged. The simple explanation is that the love of Christ constrained him, and when I last heard him address a meeting in the Free Barony of this city in the winter of 1867-68, there was the same note of personal experience and of wonder at "the infinitude of God's love to our fallen race" which marked his first appeals.

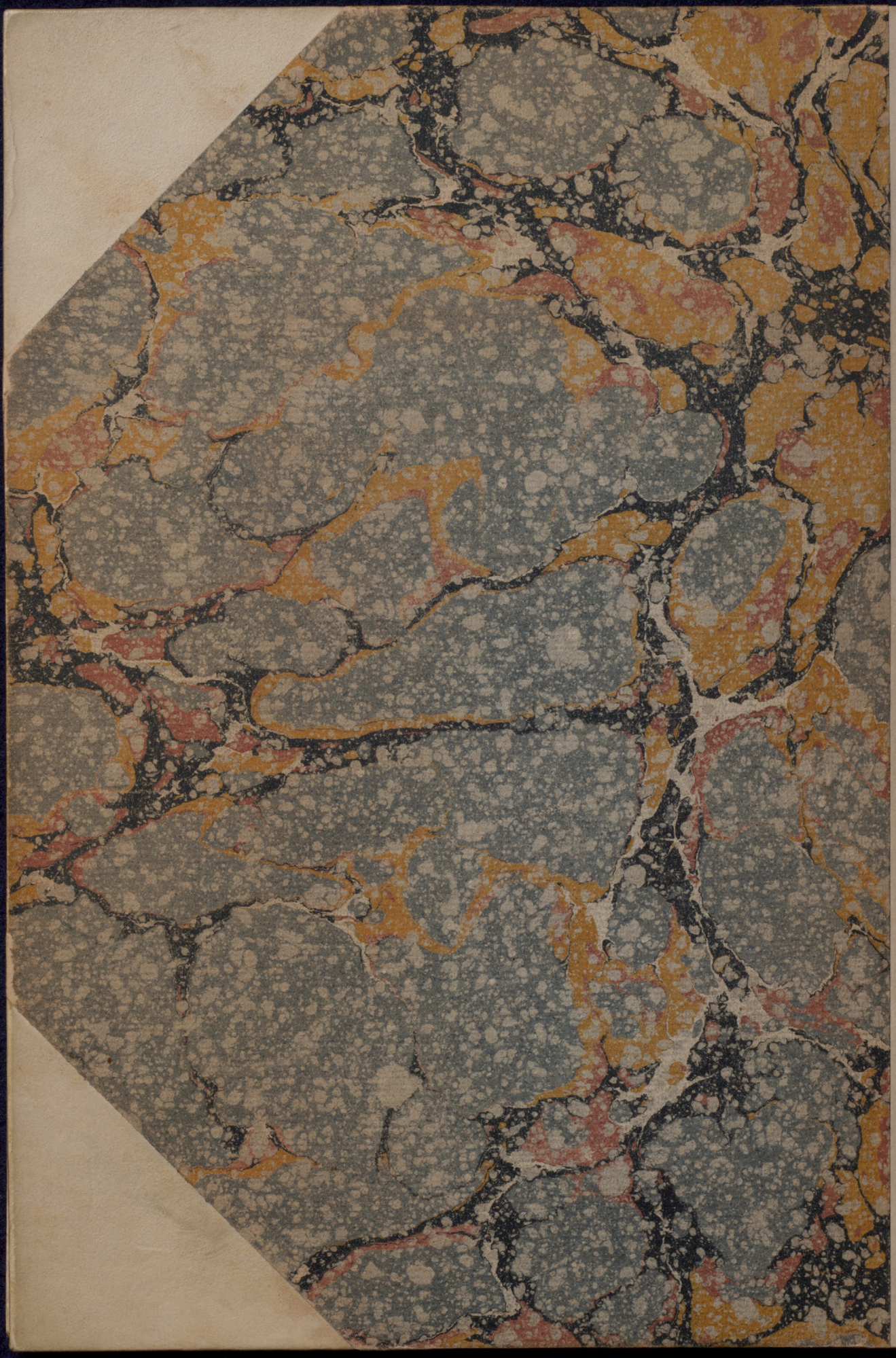
The change in his acknowledged relation to God in no way lessened the service he still delighted to render to his fellows, but it variously affected various minds. An Edinburgh gossip asked Miss Catherine Sinclair if she had heard of his conversion, and that excellent lady replied, "If Professor Simpson has been converted, it is time some of the rest of us were seeing if we do not need to be converted." When he presided at an evangelistic meeting addressed by Dr. Hanna, a woman said the sight of the chairman's happy face had done her as much good as a sermon. He went to a meeting of the Royal Society in the company of his life-long friend, Dr. Skae, of Morningside Asylum, and some of the Fellows thought it a good joke to infer that Simpson had gone mad, and to send round the rumour that Skae was looking after him. "And have you read it?" asked Dr. Andrew Wood of Father Rigg, afterwards Bishop of Dunkeld, when he told him that Professor Simpson had given him a copy of his address, entitled *Dead in Trespasses and Sins*. "Yes," said that good Catholic, "I have read every word of it." "Well, what do you think of it?" "It's the production, sir, of a genius."

When Sir David Brewster died in 1868, Sir James Simpson, who had been asked to move the resolution of regret in the Royal Society of Edinburgh, told how he had seen that "archpriest of science passing fearlessly through the valley of death, sustained and gladdened with the all-simple and all-sufficient faith of a very child." His words described to the letter his own departure in 1870; and if, with Sir David's gifted daughter, we try in imagination to follow these great spirits through tracts unknown, and to see on what high quests they fare forth there, we can only say with her of one as of the other—

> "We see not, we see not; but this we know,
> He has bowed his head with its honours low.
> 'Not mine! not mine!' is his whisper meet,
> As he casts his crown at his Saviour's feet."

THE DISCOVERY OF CHLOROFORM.

In the British Medical Journal of December 14th, 1912 (p. 1681), reference was made to a proposal that the centenary of the birth of David Waldie, who suggested a trial of chloroform as an anaesthetic to Sir James Simpson, should be commemorated by a bronze tablet, to be placed on the house in Linlithgow where he lived for some time. The movement was initiated by Mr. Alexander Spence, member of the Pharmaceutical Society, an ex-sheriff of Linlithgow, now of Leslie, Fife. We learn that the response to this appeal has been gratifying, and that a tablet, designed by Mr. Hope-Pinker of Kensington, has been put up. It has on it a portrait of Waldie, with an inscription in which he is described as a pioneer in anaesthetic research; and it is stated that "to him belongs the distinction of having been the first to recommend and make practicable the use of chloroform in the alleviation of human suffering." Regard for historic truth compels us again to point out that this is an exaggerated claim. Waldie suggested to Simpson, who was then seeking for a substance possessing anaesthetic properties, that chloroform might serve his purpose, and Simpson acknowledges that he got the hint from him. But there Waldie's connexion with "anaesthetic research" seems to end. It was Simpson who, in the face of much opposition from various quarters, including many members of his own profession, gained for chloroform a firm footing in medical practice. Therefore to him rightly belongs the credit of the discovery. In saying this we have no wish to detract from the merits of David Waldie. He was an assistant in the Liverpool Apothecaries' Company when he had the conversation with Simpson which led to such momentous results, and he gave an account of the matter in a paper read at a meeting of the Liverpool Literary and Philosophic Society on November 29th, 1847, three weeks after Simpson had announced the results of his experiments. That account was quoted by the *Chemist and Druggist* of December 21st, 1912, and the substance of it was given in the Journal of January 4th, 1913 (p. 41). Any one interested in the subject will see that the claims made on behalf of Waldie are not borne out by his own statement. Waldie afterwards won distinction in India. He went to Calcutta in 1853, and was an active member of the Asiatic Society of Bengal for twenty-five years. He died at Calcutta in 1889. The society put up a brass tablet to his memory, in which he is described as the "pioneer of chemical industry in India." B.M.J. vol. 19. 13

tive diseases are tuberculosis, hookworm disease, and syphilis. Leprosy is also common, and small-pox is looked upon as an inevitable incident of human life. There is no legal restriction on medical practice. The native materia medica mainly consists of herbs, but modern "patent" medicines command a large sale. The Chinese doctors know nothing of surgery; this is due to their ignorance of anatomy. Dissections and *post-mortem* examinations were not officially authorized till November 22nd, 1913. There are some Chinese physicians trained in Western medicine, but they practise mostly in the treaty ports or are attached to mission hospitals. The medical schools are classed in four categories: (1) Government and private schools; (2) missionary schools; (3) schools for Chinese women, and (4) non-missionary schools under foreign control. The strictly Chinese schools suffer from great disadvantages caused by disturbances of the political atmosphere during the last four years and the financial difficulties of the Government. Not one of them is properly equipped or adequately staffed, and not one has access to a satisfactory hospital. China has three hospitals for women alone, besides two in which they may be educated with men. But these schools are small and poorly equipped, and there is a difficulty in getting students who have had a proper preliminary training. The non-missionary schools under foreign control are five in number: Japanese in Mukden, German in Tsingtau (of this we suppose we may now say *fuit Ilium*) and Shanghai, French in Canton, and English in Hong Kong. The commission found that a study of hospitals in China "resolves itself almost completely into a consideration of the mission hospital. The more important non-missionary hospitals established by foreigners are for the care of foreigners, and have no very definite influence on China itself. The hospitals under Chinese control, whether Government or private, are with few exceptions ineffective, and they are chiefly of interest as demonstrating how small an impression high-grade Western medicine has as yet made on China." Among the

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